

## **CHAPTER 4.0 ENVIRONMENTAL ANALYSIS**

### **INTRODUCTION**

This section documents the environmental analysis for those parameters for which the proposed Coto de Caza Specific Plan Amendment project may result or would result in potentially significant adverse impacts. These parameters were identified based on the nature and extent of the potential impacts anticipated as a result of project implementation and comments received during the NOP public comment period for the proposed project.

The purpose of Chapter 4.0 (Environmental Analysis) is to describe the existing environmental conditions on the subject property and in the environs and to identify the potential impacts or consequences that may result from implementation of the proposed project. In order to facilitate the analysis of each issue in this SEIR, a standard format was developed to analyze each issue thoroughly. This format is presented below with a brief discussion of the information included within each topic.

#### **Existing Environmental Setting**

This introductory section describes the existing environmental conditions related to each issue analyzed in the Draft SEIR. In accordance with Section 15125 of the State CEQA Guidelines, both the local and regional settings are discussed as they exist prior to implementation of the proposed project. The existing conditions provide the basis against which the potential environmental impacts are evaluated.

#### **Significance Criteria**

Specific criteria have been identified upon which the significance of project-related potential impacts are determined. The significance criteria which are the basis of the environmental analysis contained in the Draft SEIR are derived from the significant effects presented in Appendix G of the State CEQA Guidelines, the County's "Local Guidelines for Implementing the California Environmental Quality Act," State, and federal policies and programs which may apply, and other commonly accepted technical and non-technical standards.

#### **Standard Conditions**

The proposed project will incorporate, where necessary or required, standard conditions as imposed by the County and/or other responsible agencies. The standard conditions will be identified in this section of the Draft EIR.

#### **Analysis of the Proposed Project**

This section of the Draft SEIR identifies and describes the potential impacts, both adverse and beneficial, which will result from project implementation. All project-related impacts have been clearly and adequately analyzed in accordance with Section 15126 of the State CEQA Guidelines. Impacts that have been avoided or reduced to a level of insignificance are identified as "insignificant" and discussed accordingly. In order to facilitate the impact analysis, the following outline has been utilized.

- Short-Term (Construction) Impacts
- Long-Term (Operational) Impacts

### **Mitigation Measures**

Where a potential significant environmental effect has been identified in the environmental analysis, mitigation measures have been included in this section of the document which "... *minimize significant adverse impacts ... for each significant environmental effect identified in the EIR*", as prescribed in Section 15126 of the State CEQA Guidelines.

### **Unavoidable Significant Adverse Impacts**

Unavoidable significant adverse impacts are those effects that either cannot be mitigated or they remain significant even after mitigation. If any significant effects that cannot be mitigated are identified, they will be included in this section of the Draft SEIR and the Orange County Board of Supervisors will be required to adopt a Statement of Overriding Considerations that identifies and describes the public benefit(s) associated with project implementation that offset the significant impacts.



## **4.1 LAND USE AND PLANNING**

### **4.1.1 Existing Conditions**

#### **Existing Land Use**

##### **Existing Site**

The subject property encompasses approximately 127 acres of open space within the Coto de Caza Specific Plan in unincorporated Orange County. The site is undeveloped and is characterized by moderately steep topography that includes hills, valleys and drainage swales. The site is sloping generally from east to west, depending on the location in the landscape. Elevations on the site range from about 700 feet above mean sea level (amsl) to approximately 850 feet amsl. The subject property has been disturbed by human activities, including off-road vehicular use. In addition, several dirt roads traverse the project site, which have impacted plant and animal habitat.

##### **Surrounding Property**

As indicated above, the site is located within Coto de Caza, a suburban community developed pursuant to the Coto de Caza Specific Plan, which encompasses 4,937 homes. The site is surrounded by additional open space to the east, north and south that supports similar habitat, including coastal sage scrub and native species. Land immediately west of the project site is developed with single-family homes within the Coto de Caza community.

#### **Land Use Planning**

##### **Orange County General Plan**

##### **Land Use Element**

The Orange County Land Use Element describes objectives, policies, and land use patterns for all unincorporated territory in both narrative and graphic terms and establishes development criteria and standards, including population density and building intensity. Land use categories are used to depict the general distribution, location, and extent of public and private uses of land. In accomplishing this primary purpose, the Land Use Element fulfills the requirements of Section 65302(a) of the California Government Code, which establishes it as a mandated element of the General Plan. The subject property is designated 1B (Suburban Residential) on the Orange County Land Use Element.

Through a combination of objectives, policies, and programs, the Land Use Element has two additional purposes. First, many of the goals of the General Plan can be achieved through the application of land use policies. These land use policies provide a basis for the evaluation of physical development and growth trends in order to achieve the General Plan goals. Second, these policies determine land use capacities and the appropriate level of public services and infrastructure necessary to support these capacities.

##### **Housing Element**

The purpose of the Housing Element is to ensure the County establishes policies, procedures and incentives in its land use planning and development activities that will result in the maintenance and expansion of the housing supply to adequately accommodate households currently living and expected to live in the unincorporated County. It institutes policies that will guide County decision-making, and establishes an action program to implement housing goals through 2014.

Although some County housing programs operate within cities, the County's Housing Element primarily addresses housing issues in the unincorporated areas. Foremost among these issues is the provision of a mix of housing types to meet the needs of all economic segments of the unincorporated area. In response, the Housing Element makes provisions for affordable and accessible housing for special needs groups in the community, and is designed to provide guidance in the maintenance of existing affordable housing. These commitments are an expression of the statewide housing goal of "decent housing and a suitable living environment for every California family."

#### Transportation Element

The Orange County Transportation Element sets forth a comprehensive strategy for planning, developing, and maintaining a surface transportation system to serve existing and planned land uses in the unincorporated areas of Orange County. The primary goal, consistent with the State mandate, was originally adopted by the Orange County Board of Supervisors on May 10, 1972. On June 9, 1982, this goal was reaffirmed as follows:

*To develop an integrated transportation system consisting of a blend of transportation modes capable of meeting the need to move people and goods by private and public means with maximum efficiency, convenience, economy, safety, and comfort and a system that is consistent with other goals and values of the County and the region.*

The Transportation Element also include the County's Circulation, Bikeways, and Scenic Highways Plans, which identify and describe the circulation infrastructure that accommodates both motorized and non-motorized vehicles in Orange County.

#### Safety Element

The Safety Element is a primary document for identifying hazards that must be considered in the physical development of a jurisdiction. While the Safety Element is required to focus on fire, flood, and geologic hazards, it may also address other locally relevant safety issues. The County's Safety Element includes a comprehensive inventory of potential hazards that primarily impact persons and property in the unincorporated areas of Orange County. This hazards inventory identified information that was necessary for the development of goals, objectives, policies, and implementation programs included in the Element. The policies and programs of the Safety Element form an effective implementation plan to meet the established goals and objectives of the Element. The Safety Element serves to guide and direct local government decision-making in safety-related matters and also fosters coordination with regional, state, and federal policies and programs.

#### Resources Element

The Resources Element sets forth a comprehensive strategy for the development, management, preservation, and conservation of resources that are necessary to meet Orange County's existing and future demands. This strategy is expressed as an integrated framework of resource goals, policies, and programs. The goals of the Element are based primarily on quantified objectives, an assessment of resource needs, and identification of problems impeding the development, management, preservation, or conservation of County resources. This element of the County's General Plan addresses several resource components, including wildlife/habitat resources, energy resources, mineral resources, prime farmland, open space resources, surface and groundwater resources, and cultural/scientific resources within the unincorporated areas of Orange County.

The policies and programs of the Resources Element form the County's intent to meet the established goals articulated in the element. Consequently, the Resources Element serves to guide and direct local government decision-making in resource-related matters and also facilitates coordination with regional, state, and federal resource policies and programs. One of the major purposes of the Resources Element is to provide a clear statement of County policy so that timely steps can be taken to ensure that an adequate supply of all necessary resources will be available to meet the County's growth needs.

#### **Noise Element**

The Noise Element, which is a mandatory component of the General Plan, contains information that relates to the noise environment in the unincorporated sections of Orange County. The element addresses both mobile-source noise associated with the transportation systems serving the County, including the arterials and freeways, airports and railroad facilities as well as stationary source noise associated with construction and operations of industrial and other land uses. The scope of the Element includes the unincorporated portions of the County of Orange. The purpose of the Noise Element is to provide a statement of public policy and a decision framework for the maintenance of a quiet environment. The Noise Element identifies the sources of noise, analyzes the extent of the noise intrusion, and estimates its potential impact upon the County. This identification process in turn provides the basis for goals, policies, and implementation programs designed to preserve, where possible, a quiet environment in the County of Orange. No portion of the subject property is located within an area that is identified within the existing and future noise contours exceeding 65 dBA CNEL.

#### **Coto de Caza Specific Plan**

The Coto de Caza Specific Plan was adopted by the Orange County Board of Supervisors in 1982. In addition to the residential development, which is the predominant land use within the Coto de Caza community, the Specific Plan provided for a combination of open space, commercial, community facilities, and recreation uses. Development within Coto de Caza occurred primarily from north to south and includes a variety of single-family residential development as well as commercial development and related uses (e.g., recreation, etc.) The Specific Plan encompasses a total of 24 planning areas and allows for the development of a total of 6,268 dwelling units within 4,764 acres dedicated to the development areas within the Coto de Caza Specific Plan. In addition, a total of 2,290 acres of open space has also been allocated within the approved planning areas, as reflected in Table 4.1-1.

**Table 4.1-1**

**Coto de Caza Specific Plan – Approved Development  
Coto de Caza Specific Plan Amendment**

<b>Planning Area</b>	<b>Land Use Designation</b>	<b>No. of Dwelling Units</b>	<b>Residential Acres<sup>1</sup></b>	<b>Open Space Acres<sup>2</sup></b>
PA 1	Rural Residential	75	354	115
PA 2	Medium Density	63	44	13
PA 3	Medium Density	400	233	68
PA 4	Medium Density	644	319	147
PA 5	Low Density	118	129	102
PA 6	Low Density	383	317	158
PA 7	Rural Residential	152	535	190
PA 8 <sup>3</sup>	Medium Density	350	116	44
PA 9	Medium Density	104	16	2
PA 10	Rural Residential	197	684	378
PA 11	Medium Density	920	382	190
PA 12	Low Density	168	236	97
PA 13	Medium Density	265	125	38
PA 14	Medium Density	340	130	30
PA 15 <sup>3</sup>	High Density	978	177	49
PA 16	Medium Density	100	64	22
PA 17	Medium Density	955	311	95
PA 18	Regional Open Space	--	475	475
PA 19	Community Center/Commercial	--	19	17
PA 20	Community Center/Commercial	56	25	2
PA 21	Community Center/Commercial	--	36	2
PA 22	Community Center/Commercial	<sup>3</sup>	16	6
PA 23	Community Center/Commercial	--	4	0
PA 24 <sup>4</sup>	Community Center/Commercial	--	17	17
<b>Totals</b>	<b>Community Center/Commercial</b>	<b>6,268</b>	<b>4,764</b>	<b>2,290</b>

<sup>1</sup>Acreage does not include roads.

<sup>2</sup>Acreage includes Resource Preservation Areas, Scenic Areas, Regional park, Golf Courses, and the Community Parks in PA5 and PA 16.

<sup>3</sup>Potential affordable housing sites. If built, an equivalent number of units will be deducted from other planning areas. The total of 6,268 dwelling units may not be exceeded without prior approval of an amendment to the Coto de Caza Specific Plan.

<sup>4</sup>Major use in this PA is Coto de Caza Golf & Racquet Club.

SOURCE: Coto de Caza Specific Plan (Amendment No. 3; June 6, 1995)

The subject property is located in PA 10, which is designated as "Rural Residential," which allows residential development to occur at a density of 0 to 1.0 dwelling unit (du) per gross acre. As indicated in Table 4.1-1, PA 10 is designated as Rural Residential. A total of 197 residential dwelling units are permitted within that planning area on 684 acres, with 378 additional acres allocated to open space. To date, 188 dwelling units have been constructed and exist within PA 10, which is 9 dwelling units fewer than permitted within the planning area. A summary of residential development that has occurred within PA 10 is provided in Table 4.1-2.

Table 4.1-2

**Planning Area 10 Statistical Summary  
Coto de Caza Specific Plan Amendment**

Tract No.	No. of Dwelling Units	Open Space Acres
14505	6	1.25
14504	9	5.0
14337	14	5.0
15245	54	35.344
15327	13	4.284
15328	24	20.629
15329	24	47.637
15533	22	68.902
15726	22	67.354
		9.0 <sup>1</sup>
		68.8 <sup>2</sup>
		126.51 <sup>3</sup>
Total	188	459.71

<sup>1</sup>Additional area to south (Portion of Tracts 15996 and 15726),  
<sup>2</sup>R.S. 84-1136 and M.B. 108/25-29.  
<sup>3</sup>Subject property.

SOURCE: Planning Associates (2010)

As indicated in Table 4.1-2, the number of permitted dwelling units (197) has not been reached; however, 459.71 acres of open space currently exist, which exceeds the required minimum open space acreage of 378 acres by over 81 acres (21.6 percent) at the present time.

In addition to the Rural Residential land use designation prescribed in the Specific Plan for Planning Area 10, the 126.51-acre project site is located in an area that is designated as "Scenic Areas" on Exhibit 3 (Major Open Space Areas), "Restricted Grading Area" on Exhibit 6 (Master Grading Concept), and "Resource Preservation and Scenic Areas" on Exhibit 7 (Development Map) in the Coto de Caza Specific Plan. As such, development of the subject property is guided by policies and development regulations that are intended to enhance, preserve and/or protect the open space, which is identified as the key to the physical form of the Coto de Caza community.

The Specific Plan notes that scenic areas are typically implemented through easements. As indicated in Section 3.4, the Grant of Easement for the 127-acre property, which was offered to and accepted by the County, allows for development of the site with a "Hunt Club" or other recreational amenities, including a golf course, with the building coverage limited to 15 percent of the total easement area. Other development standards and/or criteria pertaining to the subject property relate to Restricted Grading Areas, which are intended to minimize the effect of landform alteration. Finally, although the Open Space regulations do not permit residential development within the areas identified for Open Space, including the subject property; the regulations do provide for minor shifts of development of up to 10 percent into an area shown as a Major Open Space Area, if approved by the Subdivision Committee (or, if greater than 10 percent, by the Planning Commission) as long as an equivalent or greater amount of open space is provided that is of equal or greater quality.

### SCAG Policies and Programs

The Southern California Association of Governments (SCAG) is a Joint Powers Agency that was established under the California Government Code. Under federal and state law, SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO) having the mandated roles and responsibilities described below.

As the region's MPO, SCAG is required to maintain a continuing cooperative and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program. Further, as the RTPA, SCAG is also responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Plan (RTIP).

SCAG is also responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the South Coast Air quality Management Plan and is responsible for determining conformity of projects, plans and programs to the Air Quality Management Plan prepared by the South Coast Air Quality Management District.

The Growth Management chapter of the Regional Comprehensive Plan and Guide (RCPG) contains several policies that are particularly applicable to the proposed project, including those related to population, housing and employment and the provision of adequate public facilities and infrastructure. The Growth Management chapter contains goals to improve the regional standard of living, quality of life, and to provide social, political, and cultural diversity. The Air Quality chapter of the RCPG contains core actions related to development to ensure that regional air quality goals and objectives are met. In addition, the Water Quality chapter also contains core recommendations and policy options to restore and maintain the chemical, physical and biological integrity of the nation's water and to achieve and maintain water quality objectives that are necessary to protect the beneficial uses of all waters.

### Southern Subregion Habitat Conservation Plan

The subject property is located within Subarea 3 of the Southern Subregion Habitat Conservation Plan (SSHCP). The SSHCP was approved by the U.S. Fish & Wildlife Service in January of 2007 after an extensive public participation process. In summary, the Conservation Strategy contained in the SSHCP consists of four elements, including:

- A permanent habitat reserve (i.e., the Southern Subregion Habitat Reserve)
- A Habitat Reserve Management and Monitoring Program (HRMP)
- Regulatory coverage for Covered Activities and designated Covered Species
- An Implementation Agreement and Associated funding assurances

The Southern Subregion Habitat Reserve consists of 11,950 acres of County parklands, including O'Neill, Caspers, and Riley Parks) and 20,868 acres owned by the Rancho Mission Viejo Company (RMV). Together, these habitat reserve acres provide: (1) large blocks of natural vegetation communities that provide habitat for covered species; (2) "important" and "major" populations of the covered species in key locations; (3) wildlife corridors and habitat linkages that connect the large habitat blocks and covered species populations to each other, the Cleveland National Forest, and the adjacent Orange County Central-Coastal NCCP/HCP; and (4) the underlying hydrogeomorphic processes that support the major vegetation communities providing habitat for the covered species.

Currently, local, state, and federal agencies, in cooperation with local landowners, are engaged in coordinated land use and natural resource conservation planning efforts to address future economic development within a 91,000-acre portion of Southern Orange County. The three planning processes that have been completed include: (1) an amendment to the County's General Plan and Zone Change for the Rancho Mission Viejo "Ranch Plan;" (2) development of a Special Area Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) for the San Juan Creek and San Mateo Creek Watersheds; and (3) development of a South County Habitat Conservation Plan (HCP).

#### **4.1.2 Significance Criteria**

Land use impacts are considered significant if the proposed project will conflict with the adopted plans and goals of the community as expressed in the Orange County General Plan. In addition, the following would be considered significant adverse impacts of the proposed project related to land use:

- Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.
- Conflict with an adopted habitat conservation plan or natural community conservation plan.
- Physically divide an established community.
- Substantial or extreme use incompatibility.
- Incompatible land uses in an aircraft accident potential area as defined in an airport land use plan.
- Inconsistency or conflict with established recreational, educational, religious or scientific uses of the area.

#### **4.1.3 Standard Conditions**

SC 4.1-1      Prior to issuance of any grading permit, future development of the project site shall comply with the development standards for rural residential development prescribed in the adopted Coto de Caza Specific Plan.

#### **4.1.4 Potential Impacts**

##### **4.1.4.1 Short-Term Construction Impacts**

###### *Substantial or extreme use incompatibility*

Short-term land use incompatibility is related to the actual construction of the improvements. These conflicts include disturbances to the existing single-family residential development located adjacent to and in the vicinity of the proposed residential subdivision. Specifically, the land use "conflicts" would include construction noise, air and dust emissions. However, each of these potential impacts is addressed in detail in the initial study prepared for the project (refer to Appendix A).

As indicated in the air quality analysis presented in the initial study, construction activities necessary to implement the proposed improvements would result in short-term air emissions. In particular, fugitive dust and particulates would be generated by the surficial excavations and construction activities, as well as from construction equipment. As a result, dust, both small diameter respirable matter (PM<sub>10</sub>) and larger, heavier particulates, would be carried from the construction site and ultimately settle in nearby areas. Their effects would be noticeable on automobiles and structures. However, the dust and particulate emissions would cease upon completion of the construction activities. Appropriate measures aimed at abating fugitive dust (e.g., spraying exposed areas, etc.) must be incorporated into the proposed project to ensure that these short-term impacts are minimized.

Similar to air emissions, elevated noise levels would also occur during the construction phase of the proposed project. The most sensitive “receptors” are the residents of the residential development along Van Gogh Way, approximately 700 feet west of the project site. As described in the initial study, peak noise levels of up to 90 dB(A) may be associated with the construction equipment operating in the vicinity of the proposed project site during the construction phase(s). However, construction activities must comply with the County’s Noise Element and Noise Ordinance. The County’s Noise Ordinance is used to protect people from noise generated by people or machinery on adjacent property. Specifically, the ordinance addresses construction noise by regulating construction hours. Grading and construction hours will be restricted to those hours established by the Noise Ordinance (i.e., 7:00 a.m. to 6:00 p.m. Monday through Friday and 8:30 a.m. to 4:30 p.m. on Saturday).

#### 4.1.4.2 Long-Term Operational Impacts

*Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.*

#### Orange County General Plan

The proposed project will not require a General Plan Amendment; however, project implementation does necessitate amending the Coto de Caza Specific Plan (map only). Although the proposed land uses are consistent with the long-range plans and programs adopted by the County for Planning Area 10, the proposed development footprint is located outside that approved for the subject property. As a result, a Specific Plan Amendment is required to revise several maps in the Coto de Caza Specific Plan as discussed later in this section to reflect the proposed new development area within Planning Area 10. The proposed project is also consistent with the goals and policies articulated in the Orange County General Plan as discussed in the following analysis presented in Table 4.1-3.

**Table 4.1-3**

**General Plan Consistency Analysis – Relevant Policies  
Coto de Caza Specific Plan Amendment**

General Plan Policy	Consistency Analysis
<b>Land Use Element</b>	
Policy 1 – To plan urban land uses with a balance of residential, industrial, commercial, and public land uses.	The proposed project includes the development of seven (7) lots within the Coto de Caza Planned Community. Although the location of the proposed project occurs outside the development footprint identified for the residential development, the proposed dwelling units are within the dwelling unit allocation for Planning Area 10 prescribed in the Specific Plan prepared for Coto de Caza. Furthermore, even with the development of the proposed project, the amount of open space in PA 10 will exceed the minimum amount of open



	space prescribed in the Coto de Caza Specific Plan. Finally, no significant visual impacts or landform alteration would occur. As a result, the project is consistent with the plan to provide a balance of uses within the planned community.
Policy 2 – To phase development consistent with the adequacy of public services and facilities within the capacity defined by the General Plan.	Sewer, water and storm drain facilities exist within the developed portion of Planning Area 10. Project implementation will require the extension of the existing sewer and water facilities to the subject property. The Santa Margarita Water District has adequate sewer capacity and domestic water supplies to provide an adequate level of service to the proposed residential subdivision.
Policy 3 – To provide a variety of residential densities which permit a mix of housing opportunities affordable to the county's labor force.	The applicant is proposing the development of seven custom single-family residential dwelling units. None of the residential dwelling units are proposed as affordable housing. Because the County does not require the provision of affordable housing, no impacts to affordable housing would occur. As indicated above, the proposed dwelling units are consistent with the type and density permitted within Planning Area 10. A variety of residential development currently exists within the Coto de Caza Planned Community; no affordable housing is proposed.
Policy 4 – To plan an integrated land use and transportation system that accommodates travel demand.	Project implementation will necessitate only the extension of a roadway from the existing residential development to the west. All of the infrastructure, including the transportation system, exists to provide meet the travel demand created by the proposed project and the existing development.
Policy 6 – To require new development to be compatible with adjacent areas.	As previously indicated, the proposed residential development is consistent with the density allocation prescribed in the Coto de Caza Specific Plan for Planning Area 10. The proposed project has been designed to minimize grading and impacts to the natural habitat surrounding the project site. The proposed single-family residential development is compatible with the existing single-family residences to the west.
Policy 7 – To encourage innovative concepts which contribute to the solution of land use problems.	The proposed project employs only minimal grading that is necessary to create building pads for the access road and building pads for the proposed residential dwelling units in order to minimize impacts to important biological resources on the subject property. No significant land use conflicts are anticipated.
Policy 8 – To guide development so that the quality of the physical environment is enhanced.	Landform alteration necessary to accommodate only building pads and the access roadways to serve the project, thereby minimizing impacts to the natural habitat. The loss of coastal sage scrub habitat will be mitigated through the dedication of existing habitat in accordance with the mitigation ratio requirements prescribed by the County for occupied and unoccupied coastal sage scrub habitat.
<b>Natural Resources Element – Open Space</b>	
Policy 1.1 – To guide and regulate development of the unincorporated areas of the County to ensure that the character and natural beauty of Orange County is retained.	Refer to Land Use Element Policy 8. As prescribed in the Coto de Caza Specific Plan, a minimum of 378 acres of open space has been allocated for PA 10. Although implementation of the proposed project would result in a reduction in open space by approximately 26 acres from the 459.71 acres of open space that currently exist, 434.2 acres of open space would remain in the planning area after project implementation, which exceeds the minimum open space requirement by approximately 46.2 acres.
Policy 2.1 – To ensure the health and safety of County residents by identifying, planning, and managing open space areas subject to flooding, landslides, noise, high fire hazards, and earthquake potential.	The project site is located within a high fire hazard area as identified by the County of Orange. A fuel modification plan shall be prepared and will be submitted for review to the Orange County Fire Authority to ensure that it complies with the most current County requirements to safeguard future residences from wildland fires. In addition, the proposed development has been designed to avoid landslide areas that have been mapped in the area. In addition, the proposed homes will be designed to comply with the County's Grading

	Ordinance, California Building code and measures prescribed in the geotechnical report to ensure that structural damage and/or loss of life is minimized.
<b>Recreation Element – Master Plan of Regional Riding and Hiking Trails</b>	
The dedication and acquisition of trail right-of-way and construction of public regional riding and hiking trails and improvements shall be pursued as a condition of approval of development projects (i.e., irrevocable offers of recreation easements) consistent with the Master Plan.	<p>Other private use riding and hiking trails also extend through the property as indicated in the Coto de Caza Specific Plan (Circulation Concept). The open space network within Coto de Caza accommodates a complete trail system for both public and private use. These riding and hiking trails are augmented by an on- and off-street bikeways along portions of the circulation system.</p> <p>A portion of the Bell View Riding and Hiking Trail is located on the 127-acre property. The proposed project has been designed to leave the existing trail in place. As a result, no significant impacts are anticipated and no mitigation measures are required. However, the project proponent has committed to re-record, subject to the review and approval of OC Parks, more accurate trail easement documentation reflective of the trail's actual location prior to recordation of the subject subdivision.</p>

#### Coto de Caza Specific Plan

As previously indicated, the proposed project is located within the 684-acre PA 10 of the Coto de Caza Specific Plan, which is designated Rural Residential. As indicated in Chapter 3.0 (Project Description), development of the proposed project will not exceed the dwelling unit or open space allocation prescribed for PA 10; however, because the proposed project will result in development outside of the PA 10 development area, the proposed project will require the approval of an amendment to the adopted Coto de Caza Specific Plan. Although no revisions to the Specific Plan text are required, the following maps in the Coto de Caza Specific Plan must be revised to reflect the land use changes because the proposed project includes development that is located in areas where it is not currently permitted.

- Exhibit 3 – Major Open Space Areas (refer to Exhibit 3-6)
- Exhibit 6 – Master Grading Concept (refer to Exhibit 3-5)
- Exhibit 7 – Development Map (refer to Exhibit 3-7)

Table 4.1-4 provides an assessment of the project's consistency with the applicable adopted development guidelines in the Coto de Caza Specific Plan.

**Table 4.1-4**

#### **Coto de Caza Specific Plan – Development Guidelines Coto de Caza Specific Plan Amendment**

<b>Guideline</b>	<b>Consistency Analysis</b>
<b>Residential Uses</b>	
Dwellings are encouraged to be located (depending upon density) in clustered, and/or neighborhood units, defined by natural and man-made physical features such as landform and vegetation, roadways, and other infrastructure which accompanies development.	The proposed project is proposed to be located within an area currently identified as open space. As provided in the Coto de Caza Specific Plan, development is permitted within the designated open space if approved by the Subdivision Committee and/or Orange County Planning Commission. However, the amount of open space remaining must be equal to or exceed that allocated in the specific plan.
Rural architectural themes using natural appearing building materials and tones should be utilized whenever feasible. Monotonous architectural elements should be discouraged.	Because the proposed project includes custom homes, specific architecture and design of the dwelling units has not been developed. As indicated in the visual analysis (refer to

	Section 4.5), which concluded that future development of the seven lots with residential dwelling units would not result in potentially significant visual impacts, design of each home, including architectural character, color, landscaping, etc., will be subject to review and approval by the Orange County Zoning Administrator. The proposed dwelling units must comply with the provisions of the Coto de Caza Specific Plan, including the site development standards prescribed for Rural Residential development.
Homes should emphasize and be designed to complement topographic conditions; exposure of unsightly under stories should be discouraged.	The proposed residential development has been designed to minimize grading and its effects on the existing topography. Site alteration is limited to only the extension of the proposed access road and individual building pads for the residential dwelling units. Implementation of the landscape concept plan will ensure that the proposed dwelling units are adequately screened.
Architectural design should encourage energy efficient consciousness, taking advantage of natural heating and/or cooling, wind power and solar energy opportunities.	Each home will be subject to Title 24 standards and related energy conservation requirements prescribed by the County of Orange to ensure that energy demands are minimized.
Residential neighborhood should blend and be integrated with open space and community facilities.	The project encompasses only seven single-family residential dwelling units that are proposed in an area of PA 10 near and existing residential development (Tract 15425). As indicated above, the proposed project must comply with the development standards prescribed in the Coto de Caza Specific Plan to ensure that no significant land use conflicts occur. As currently proposed, the project has been designed to minimize visual impacts within the designated open space and from the nearby residential development within Coto de Caza (refer to Section 4.6 – Aesthetics).
Residential projects which are proposed to have more than one (1) dwelling unit with a garage face five (5) feet or less from the property line should be designed so as to minimize what would otherwise be considered to be an over-linear street scene.	The proposed project does not include any dwelling units that would have a garage face five feet or less from the property line. Furthermore, the proposed project encompasses only seven dwelling units that are “clustered” to avoid the appearance of linear development.
<b>Riding and Hiking Trails and Bikeways</b>	
Locations and phasing of vehicular, pedestrian, bike, and riding and hiking trails should be coordinated in order to provide an efficient and safe means of connection throughout the community.	Project implementation necessitates the extension of an access roadway from an existing residential tract. The extension of this roadway to the subject property will allow for safe and direct access to the residential development. The addition of project-related traffic (i.e., approximately 70 trips per day) would not contribute significant traffic through the existing residential neighborhood and, therefore, would not result in significant traffic and/or circulation impacts.
Pedestrian and bikeways should be clearly defined throughout the community.	N/A
Pedestrian walkways through community centers should be designed in an informal, meandering style.	N/A
Riding and hiking trails should be posted where intersecting with collector roadways.	As indicated in Section 3.3, the Bell View Regional Riding and Hiking Trail extends through the subject property. Although the existing improved trail is not located within the dedicated easement maintained by the County, the project applicant is proposing to relocate easement to coincide with the existing trail alignment that extends through the proposed development.
<b>Drainage</b>	
Wherever possible, drainage devices should be of materials having a natural appearance.	The proposed project will include several best management practices (BMPs) to ensure that stormwater runoff from the site will not result in significant downstream impacts. Features that will be incorporated into the project include vegetated swales, vegetated buffer strips, porous pavement detention, porous landscape detention and infiltration trenches. Both site and rooftop drainage will be directed to these features, which have

	a natural appearance, consistent with this guideline.
Provision should be designed and implemented to avoid lateral and/or vertical erosion that would change (i.e., expand) the floodplain.	The developed portion of the project is located between woodland and shrub areas, and will be graded in a manner that would not impede the natural drainage courses of the surrounding topography. Catch basins and onsite storm drains are proposed in order to adequately capture, convey and distribute storm runoff to areas without adversely impacting downstream properties.
Adequate access should be provided for purposes of maintaining the channel and other flood control amenities.	Once onsite flows reach the western boundary of the project site, they are conveyed towards Vista del Verde in natural canyon drainage areas that are located along the northerly and southerly edges of Tract 15425. From that point, flows are conveyed through Vista del Verde into Cañada Gobernadora Creek, which flows southerly to its confluence with San Juan Creek. All of the major storm drainage and flood control facilities are located in areas that have been developed and have adequate access. Project implementation will not result in any impacts to such access that would adversely affect maintenance of those facilities.
<b>Grading – All Development Areas</b>	
Landscape screening should be used to obscure graded slopes from view of any public road.	Consistent with the guideline, the proposed project incorporates landscaping that will adequately screen the development from public roadways. The visual simulations reflect the landscape character from the public vantages, including public roads, within the project environs. As indicated in the visual simulations (refer to Section 4.5 – Aesthetics), the site has been designed to minimize views from public roads and landscaping has been incorporated into the project design to screen areas of the site that are exposed.
The existing landform should provide a smooth and gradual transition between graded slopes and the existing grade while preserving and enhancing the basic topographic character of the existing site.	As previously indicated, grading has been limited to the access road that would be extended from Van Gogh Way to the site and to create building pads for the proposed residential dwelling units. Although some alteration of the existing topography is proposed, the general topographic character of the site and surrounding area will not be retained.
Manufactured slopes should be rounded to blend in with the existing topography and visible slopes should be enhanced with landscaping.	Consistent with this policy, contour grading techniques will be incorporated into the proposed project to maintain the general integrity of the existing landforms. In addition, landscaping with a variety of native plant materials is intended to complement the natural character of the area and to avoid conflicts associated with the integration of non-native materials.
Landform and grading designs in all grading areas, including undeveloped parcels, in the area shown on Exhibit 6 *Master Grading Concept) as "Existing Development" should conform with the Orange County Grading and Excavation Code.	Project implementation, which includes grading within the designated open space, is subject to and must comply with the County's Grading and Excavation Code.
<b>Grading – Restricted Grading Areas</b>	
Grading necessary for roadways, public facilities, drainage improvements, open space recreational facilities and their supportive uses should be minimized and sensitive to the resources. Grading techniques should restore these areas to a natural appearing state as much as possible.	Although the proposed project would require grading in an area currently designated as "Restricted Grading Areas," the applicant is requesting an amendment to the Coto de Caza Specific Plan that would expand the existing PA 10 development area to include the 127-acre property. As indicated in the discussion of development in areas designated as "Scenic Areas" (refer to Table 4.1-4), grading for development in scenic areas is permitted if the amount of open space equals or exceeds the minimum open space allocated within the planning area. Based on the proposed project, development of the subject property as proposed would result in 434.8 acres of open space in PA 10, which is approximately 56 acres more than the 378 acres prescribed in the specific plan.
Grading in Resource Preservation Areas should be prohibited except for trail and public safety purposes such as fuel	Although the subject property is also designated as "Resource Preservation Areas," the applicant is proposing to remove a

modification. Cut and fill areas should be limited to 10 feet in height.	portion of the 127-acre property from the designated open space/resource preservation area and incorporate it into the development area of PA 10. As indicated in Section 4.3 (Biological Resources), approximately 12.13 acres of permanent impacts to coastal sage scrub habitat would occur (i.e., proposed development and fuel modification areas), including impacts to one pair of coastal California gnatcatchers). In addition, temporary impacts to 2.88 acres of CSS will occur, which will be revegetated. Adequate mitigation in the form of the dedication of CSS habitat within the 127-acre property, has been incorporated into the project to ensure that potentially significant impacts to biological resources are reduced to a less than significant level (refer to Section 4.2).
Grading, beyond that needed for structures, should be allowed within the Scenic Areas as long as the end result would preserve or enhance the natural environment. All grading over 500 cubic yards (cuts or fills, whichever is greater) in the Scenic Areas should be part of an approved site development permit or sub division map.	As indicated above, the applicant is proposing to amend the Coto de Caza Specific Plan in order to expand the development area within PA 10 and permit residential development. If approved, grading for the proposed project would include approximately 5,000 cubic yards of cut/fill, which would be balanced on-site. Contour grading will be incorporated in order to minimize the effects of grading and landform alteration. In addition, landscaping will also be incorporated into the project design to complement to natural habitat surrounding the subject property. The project will result in a building coverage of only 11.5 percent, which is less than the 15 percent building coverage permitted by the Specific Plan.

In addition to the policies identified in Table 4.1-4, the Coto de Caza Specific Plan also includes guidelines for development within the designated scenic areas. These guidelines are identified and discussed in Table 4.1-5

**Table 4.1-5**

**Coto de Caza Specific Plan “Scenic Area” Guidelines  
Coto de Caza Specific Plan Amendment**

<b>Guideline</b>	<b>Consistency Analysis</b>
Permitted uses should be limited to those uses specified in the development regulations in “III. Regulations Section 2: Open Space Regulations”	<p>The proposed project, which includes development of the subject property with seven single-family residential dwelling units, is inconsistent with the open space regulations prescribed in Section 2 of Chapter III (Regulations). Specifically, residential structures are prohibited uses in Open Space areas within the Coto de Caza Specific Plan.</p> <p>Although residential development is not permitted within the Open Space, the Coto de Caza Specific Plan also includes a series of special regulations, including the provision to allow minor shifts of development of up to 10 percent in an area shown as a Major Open Space area on Exhibit 3 in the Specific Plan. The special regulations allow for development within the open space “... if approved by the Subdivision Committee as a result of action on a subdivision map, or if greater by the Planning Commission as a result of action on a site development permit or use permit, as long as the end result is an equivalent or greater amount of open space being provided of equal or greater quality.”</p> <p>Although the partial development of the 127-acre property would include seven single-family residential dwelling units, after development of the site as proposed, the open space acreage within PA 10 would total 434.2 acres (i.e., approximately 6</p>

	percent less than the 459.71 acres that currently exist), or approximately 56 acres more than the minimum 378 acres prescribed in the Specific Plan for the planning area. In addition, the 195 dwelling units that would exist in the planning area is within the 197 homes allocated for PA 10.
Structures should be screened through the use of landscaping and landform reconstruction.	Extensive landscaping is proposed to screen the proposed residential dwelling units. Landscaping will include native plant materials and other drought-tolerant landscaping to complement the existing native habitat in the project area. In addition, grading is proposed to accommodate only the access road and the building pads of the proposed residential dwelling units.
Structures and impervious surfaces should be limited to fifteen percent (15%) of the area dedicated as a scenic easement on any individual site, and be related to: (1) an outdoor recreation use; (b) other open space purposes; or, (3) to a public utility.	The total impervious area of the site would be approximately 6.5 percent, which is less than the 15 percent specified in the Specific Plan. Although not related to the uses identified, as indicated above, residential development within a designated Major Open Space area may be permitted in accordance with the special regulations as discussed above.
Grading, beyond that need for structure, should be allowed within the Scenic Areas as long as the end result would preserve or enhance the natural environment. Examples of such grading include, but are not necessarily limited to removal of landslides or falling rock hazards, landscaping that enhances plant or animal communities, and erosion control (see also: Master Grading Concept, Page 44). All grading over five hundred (500) cubic yards (cuts or fills, whichever is greater) in the Scenic Areas should be part of an approved site development permit or subdivision map.	<p>The grading proposed for the project is specifically intended to accommodate residential development in accordance with the special regulations permitted in the Coto de Caza Specific Plan. The subject property is located in an area designated as "Restricted Grading Areas," which limits grading to that necessary for roadways, public facilities, drainage improvements, open space recreational facilities and their supportive uses. Furthermore, grading in Resource Preservation Areas "... should be prohibited except for trail and public safety purposes such as fuel modification. Cut and fill areas should be limited to 10 feet in height."</p> <p>The proposed project includes residential development and some grading necessitated to accommodate the residential dwelling units would exceed the 10-foot height limit. However, as indicated above, the applicant is proposing a Specific Plan Amendment to permit residential development within the Open Space Area and will be subject to review and approval by the Orange County Planning Commission and Board of Supervisors, in accordance with Specific Plan requirements.</p>
Use of earth tones and other colors coordinated with the existing landscaping and use of "rural" theme structures should be emphasized for any accessory structures to be located in a Scenic Area.	As previously indicated, the residential structures will be subject to review and approval by the County of Orange. Plans will be submitted that reflect appropriate design, colors, and landscaping that comply with the development guidelines articulated in the Coto de Caza Specific Plan and other applicable County standards.
Dedication of Scenic Easements should be accomplished concurrently with subdivision map recordation.	N/A

As required in the Coto de Caza Specific Plan, development may occur within the designated open space areas; however, the total amount of open space must be equal to or greater than the minimum open space allocated. As indicated in Table 4.1-1, a minimum of 378 acres of open space is required to be provided in PA 10. Table 4.1-6 reflects the change that would occur as a result of developing a 15-acre portion of the 127-acre property as proposed. As indicated in the table, a total of 434.2 acres of open space would remain in PA 10, which exceeds the 378-acre minimum by 56.2 acres. In addition, development of the seven single-family residential dwelling units would bring the total number of dwelling units in PA 10 to 195, which is less than the 197 homes allocated for that planning area. Therefore, development of the proposed project would neither exceed the total number of residential dwelling units nor result in a significant loss of open space within PA 10 or the Coto de Caza Specific Plan.

**Table 4.1-6**

**Planning Area 10 Development Summary – With TTM 17325  
Coto de Caza Specific Plan Amendment**

Tract No.	No. of Dwelling Units	Open Space (Acres)
14505	6	1.3
14504	9	5.0
14337	14	5.0
15245	54	35.3
15327	13	4.3
15328	24	20.6
15329	24	47.6
15533	22	68.9
15726	22	67.4
17325 <sup>1</sup>	7	101.0
		9.0 <sup>2</sup>
		68.8 <sup>3</sup>
Total PA 10 Open Space		434.2
PA 10 Required Open Space		378
Excess Open Space <sup>4</sup>	195 <sup>5</sup>	56.2

<sup>1</sup>Subject property.  
<sup>2</sup>Additional area to south (Portion of Tracts 15996 and 15726),  
<sup>3</sup>R.S. 84-1136 and M.B. 108/25-29.  
<sup>4</sup>Based on Exhibit 8 (Statistical Table) in Coto de Caza Specific Plan.  
<sup>5</sup>PA 10 allows for a total of 197 single-family residential dwelling units.

SOURCE: Planning Associates (2010)

**SCAG Policies and Programs**

Table 4.1-7 provides a discussion of the project's consistency with the goals, objectives, policies and programs reflected in the Regional Comprehensive Plan and Guide. As indicated in Table 4.1-7, the proposed project is consistent with the SCAG projections, plans and policies and no significant impacts will occur as a result of project implementation.

**Table 4.1-7**

**Regional Comprehensive Plan and Guide (RCPG) Consistency Analysis  
Coto de Caza Specific Plan Amendment**

Policy No.	RCPG Policy	Consistency Analysis
<b>Growth Management Chapter</b>		
3.01	The population, housing and jobs forecasts, which are adopted by SCAG's Regional Council and that reflected in local plans and policies, shall be used by SCAG in all phases of implementation and review.	Implementation of the proposed project would allow for the development of 7 additional dwelling units within PA 10. The addition of the 7 single-family residential dwelling units is within the dwelling unit allocation for PA 10 (197) and, therefore, would be consistent with the Coto de Caza Specific Plan as well as the SCAG



		population, housing and jobs forecasts, which are based on the adopted specific plan.
3.03	The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.	The subject property is located near an area of Coto de Caza that is developed and is supported by adequate infrastructure, including sewer, water, storm drains, and roadways. Although project implementation will necessitate the extension of an access road and other utilities to the subject property, adequate capacity in those facilities exists to serve the seven residential dwelling units proposed in TTM 17325.
<b>Regional Transportation Plan</b>		
4.01	Transportation investments shall be based on SCAG's adopted Regional Performance indicators (i.e., mobility, accessibility, environment, reliability, safety, livable communities, equity, and cost-effectiveness).	The project site is located in the vicinity of high volume, major arterials that would facilitate safe, convenient access to residents (i.e., mobility/accessibility/safety) of the proposed residential subdivision. Implementation of the access road will ensure that adequate access to the project will be provided. No significant increase in traffic is anticipated as a result of project implementation because the traffic generated by the proposed homes will not exceed that anticipated from the PA 10 based on the prior traffic analysis.
4.02	Transportation investments shall mitigate environmental impacts to an acceptable level.	The project proposes several circulation improvements (i.e., extension of the access road to the site from Van Gogh Way) to ensure that the adequate vehicular access is provided and that no significant adverse impacts to circulation system occur.
4.04	Transportation control measures shall be a priority.	With the exception of extending the access road to the site, no other transportation control measures would be required to accommodate the proposed project.
4.06	Implementing transit restructuring, including Smart Shuttles, freight improvements, advanced transportation technologies, airport ground access and traveler information services are RTP priorities.	The proposed project includes the development of only 7 single-family residential dwelling units in the Coto de Caza community. Therefore, it will not be necessary to provide additional routes in order to better serve the community, which is currently served by public transportation provided by OCTA. Traveler information on public transportation can be provided by the developer, County of Orange, and/or OCTA to ensure that future residents are aware of the availability of public transportation in the area.
4.16	Maintaining and operating the existing transportation system will be a priority over expanding capacity.	As indicated previously, with the exception of the access road to serve the proposed dwelling units, project implementation will not necessitate any additional transportation infrastructure. The existing circulation system is adequate to serve the proposed project.
<b>Improvement of Regional Standard of Living</b>		
3.04	Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.	The proposed project will result in the creation of temporary jobs in the construction industry that will increase employment within Orange County. Although a General Plan Amendment is proposed, the land use is consistent with the long-range plans adopted for Coto de Caza, which will include additional housing as anticipated from buildout of the Coto de Caza Specific Plan, which is intended to meet the goals of the Orange County General Plan that include the desire to achieve a balanced community.
3.05	Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.	The site is located in an area where all of the necessary infrastructure exists and/or nearby and can be extended to the site in order to accommodate site 7-unit subdivision. With the exception of circulation, water (domestic and non-domestic) and storm drainage improvements to accommodate the development, no significant additional infrastructure improvements are required to support the proposed project.



		<p>Although the proposed project would result in an increase in residential dwelling units within PA 10, the total number of dwelling units in PA 10 permitted would nearly be reached. The Coto de Caza Specific Plan currently allows the development of up to 197 dwelling units. With the development of the seven units proposed, the total number of dwelling units in the planning area would reach 195. However, in addition to the proposed development, the applicant is also proposing to amend the existing Grant of Easement to eliminate any future additional development within PA 10 by allocating the remaining 100 acres to open space and as habitat preservation. As a result, even with the extension of infrastructure to serve the proposed project, no additional development would be permitted out in the remaining portion of the subject property.</p>
3.09	Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.	<p>As indicated above, with the exception of the costs required to extend the access road, sewer and water facilities, and accommodate drainage, no other significant infrastructure costs are necessary to ensure adequate levels of public services and utilities. Site development utilizes existing infrastructure without relying on significant expenditures of public resources.</p>
3.10	Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.	<p>Many of the project objectives are intended to achieve the SCAG policy. Specifically, the project includes concurrent processing of several discretionary actions that will enable the County to achieve the long-range goals and objectives articulated in the adopted Coto de Caza Specific Plan.</p>
<b>Improvement of Regional Quality of Life</b>		
3.12	Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.	<p>Exhibit 5A of the Coto de Caza Specific Plan reflects the recreational trails (i.e., hiking/equestrian/mountain bikes), which are intended to respond to the need to provide safe and efficient travelways for bicyclists and non-motorized travel modes. Implementation of the proposed project will not preclude the implementation of riding and hiking trails within Coto de Caza, including both public and private trails, as well as those identified on the County's Bikeway Master Plan. In addition, (public) transit routes also exist in the vicinity of the subject property. These facilities will enhance public access to the site and reduce vehicle miles traveled pursuant to this RCPG goal. As a result, project implementation will support (and not detract from) the objective promoting trip reduction.</p>
3.13	Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.	<p>The project can be characterized as "infill" development, comprising the final phase of development within PA 10. Development of up to 197 residential dwelling units was approved in 1982 when the Coto de Caza Specific Plan was approved by the County of Orange. The development constitutes "infill" within the Coto de Caza community, which is accessible by public transportation, as indicated above, by the OCTA-provided vehicles. All major arterials in Coto de Caza are served by public transportation.</p>
3.14	Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.	<p>The project parameters are thoroughly described in Section 3.0 (Project Description). The proposed project is consistent with the IB General Plan land use designation and, therefore, would not require the approval of a General Plan Amendment. The intensity of development within PA 10 allows for the development of up to 197 single-family residential dwelling units in accordance with the adopted long-range goals and objectives. In addition, the project site is located within</p>

		an area of the County this urbanized and the project site is accessible from major circulation corridors and activity centers (e.g., retail commercial and employment, local and regional recreation, etc.) in south Orange County.
3.15	Support local jurisdictions' strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.	The proposed project includes only 7 single-family residential dwelling units within PA 10, which would allow up to 197 homes as identified in the Coto de Caza Specific Plan. Although not a transit-oriented development, the proposed project site is served by a variety of transit modes, including private autos, OCTA bus service along the major arterials, and an extensive trails system. The location of the proposed uses in an area currently served by public transit will facilitate the continued viability of such services.
3.16	Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	As previously indicated, the proposed project is located in an area of the County that is developed with residential, community commercial, recreational, and open space uses. Development of the site will complete development anticipated for PA 10, consistent with the adopted long-range plans for Coto de Caza. The existing utilities and infrastructure can be extended to serve the future development and, where necessary will be upgraded and/or improved to ensure that adequate service is provided.
3.18	Encourage planned development in locations least likely to cause adverse environmental impacts.	Although project implementation will result in the loss of approximately 10 acres of coastal sage scrub habitat, the impacts will be avoided through the dedication of 26.5 acres of CSS habitat within the designated open space in PA 10.
3.20	Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.	Project implementation will result in a decrease of approximately 26 acres from the 459.71 acres of open space that currently exists within PA 10 (i.e., 6 percent decrease). With the proposed project, PA 10 will encompass approximately 434 acres of open space, resulting in a decrease of approximately 6 percent; however, that total exceeds the 378 acres allocated for that planning area in the adopted Coto de Caza Specific Plan. The provision of approximately 56 more acres of open space than required in PA 10 supports the protection of vital resources.
3.21	Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	Mitigation measures have been prescribed to ensure that any cultural, historical, and/or paleontological resources that may exist on the property will be identified, salvaged, and curated as necessary.
3.22	Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.	The project site is not located in an area that is subject to flooding during a 100-year storm or within the limits of the Cañada Gobernadora floodplain. However, the site is characterized by moderate to steeply sloping topography and is located in a high fire hazard area. Implementation of appropriate site design techniques and building design in accordance with California Building Code (CBC) requirements and recommendations prescribed in the geotechnical report will ensure that site development will avoid such potential geologic hazards. In addition, a fuel modification zone will also be integrated into the project design to comply with OCFA requirements to minimize the potential impacts resulting from wildland fires.
3.23	Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.	Where potential impacts have been identified, appropriate mitigation measures have also been prescribed to reduce the impacts to a less than significant level. Specifically, project design features, standard conditions and/or mitigation measures are included in the document to address biological resources, soils and geologic conditions, drainage/water

		quality and other conditions where potential impacts have been identified. In addition, measures to reduce construction noise and air emissions have also been identified to address the potential project-related impacts.
3.24	Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.	The County has adopted a Housing Element Implementation Program to ensure that the supply of housing within the County is adequate. To that end, the proposed project includes the development of 7 single-family detached homes that are intended to meet goals and objectives articulated in the Coto de Caza Specific Plan. However, no provision for affordable housing is included in the proposed project.
<b>Provision of Social, Political, and Cultural Equity</b>		
3.27	Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.	The public services and facilities, including police, fire, parks, schools, and recreation, etc., are available to serve the proposed project. The applicant will be required to pay developer fees for schools, fire protection and related public services to ensure that an adequate level of service is provided.
<b>Air Quality Chapter Core Actions</b>		
5.07	Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community-based shuttle services, provision of demand management-based programs, or vehicle-miles-traveled/emission fees) so that options to command and control regulations can be assessed.	Construction activities will necessitate the implementation of standard conditions prescribed by the South Coast AQMD to reduce short-term air emissions, including particulate emissions. Long-range air quality impacts resulting from mobile- and stationary-source emissions will be less than significant.
	Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.	The subject property is located within the SCAB, which is identified as a "non-attainment" area for several pollutants. Although short-term construction-related air emissions will not exceed established significance thresholds, required emission reduction measures have been prescribed by the SCAQMD that will be implemented during construction to reduce short-term impacts. Long-term, operational air emissions will be less than significant.
<b>Water Quality Chapter Recommendations and Policy Options</b>		
11.07	Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.	The use of recycled water for landscape irrigation is dependent on the availability of such resources in the project area. Construction of the 7 residential dwelling units proposed for TTM 17325 includes the incorporation of state-mandated water conservation programs in support of this policy. Therefore, implementation of the project will not detract from this SCAG policy.
<b>Open Space Ancillary Goals</b>		
9.01	Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and to promote tourism in the region.	The open space and equestrian amenities/resources are intended to serve residents of Coto de Caza as well as residents throughout Orange County. As previously indicated, several private and public trails currently exist within PA 10 that would not be adversely affected by project implementation. These trails, along with the open space, are consistent with both local and regional plans for the area.
9.02	Increase the accessibility to open space lands for outdoor recreation.	As indicated above, the proposed project includes the incorporation of open space, including trails that currently extends through PA 10 and connects with local and regional trails in the area. The provision of open space is consistent with the applicant's desire to ensure that the existing inventory of open space lands in Coto de Caza is not diminished. Project implementation will

		not significantly affect either the amount of open space in PA 10 or access to open space and recreational facilities within Coto de Caza. Following project implementation, PA 10 will exceed the required open space allocation of 378 acres by nearly 56 acres (14.1 percent).
9.03	Promote self-sustaining regional recreation resources and facilities.	Refer to Policy 9.02.
9.08	Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.	The subject property does support sensitive habitat (e.g., coastal sage scrub) and is located in an area of the County that also supports similar habitat and sensitive species, including the federally threatened coastal California gnatcatcher. Although development of TTM 17325 would result in the loss of approximately 12.13 acres of CSS habitat, the project has been designed to avoid the impact by dedicating 26.5 acres of CSS habitat within PA 10 prior to any grading and/or development occurring in order to avoid the impacts associated with the permanent loss of 12.13 acres of CSS habitat.

*Conflict with an adopted habitat conservation plan or natural community conservation plan*

The subject property is located within the Orange County Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan; however, the nearly 127-acre property was included in the 32,818-acre Reserve area without the property owner's consent. Therefore, use of the site is subject to the Implementation Agreement (IA) adopted for the Reserve. As a result of the inadvertent inclusion of the subject property in the Reserve, the applicant is working with the County of Orange and the U. S. Fish & Wildlife Service to process a "minor amendment"<sup>1</sup> in accordance with the agreement that would withdraw the 15 acres of the Hunt Club property from the Reserve and, therefore, the project would not be subject to the requirements prescribed in the Implementation Agreement (IA). The IA allows for minor amendments to be processed administratively. The proposed minor amendment, if approved, will redefine the enrollment of APN 125-101-02 and remove the subject property from the Southern Orange County Subregional Habitat Conservation Plan (SSHCP).

As indicated previously, the primary reason for the minor amendment is to rectify the inadvertent inclusion of APN 125 101 02, including the subject property, into the SSHCP. The County of Orange is a beneficiary of several easements for open space, conservation, scenic and trail purposes over parts of the subject property. The offer for enrollment was premature given the open space and development rights available to the property (i.e., the Hunt Club). Approval of the minor amendment will allow the 15 acres of the Hunt Club property to be withdrawn from the reserve (i.e., the development footprint of the proposed project) as illustrated in Exhibit 4.1-1 and replaced by 18 acres of other nearby eligible reserve property having equal or superior subregional habitat value located west of the subject property and shown in Exhibit 4.1-1. The County of Orange will enroll the 18-acre parcel into the Reserve to ensure no net loss of habitat reserve. As a result, the action to withdraw the subject property from the SSHCP will result in "no net loss" of subregional habitat. With approval of the minor amendment, no significant impacts or conflicts with the adopted HCP would occur and no mitigation measures are required.

<sup>1</sup>The minor amendment to the SSHCP requested by the applicant would be signed by the property owner, County of Orange, and U.S. Fish & Wildlife Service.





**Exhibit 4.1-1**  
**Development Footprint/Replacement Acreage**



*Physically divide an established community.*

The proposed project will not physically divide an established residential community. The project has been designed to avoid conflicts with the adjacent single-family residential areas in the vicinity of the site. Development of the subject property will virtually complete development within Planning Area 10. As previously indicated, the addition of seven single-family dwelling units as proposed will result in a total of 195 dwelling units within PA 10, which is two fewer than permitted within that planning area. In addition, the allocation of approximately 98.21 acres of open space would result in a total of 431.41 acres of open space within PA 10, or 53.41 acres (14.1 percent) greater than allocated in the Coto de Caza Specific Plan for the planning area. The relatively limited project-related traffic will be accommodated on the access road and directed to Van Gogh Way and to nearby arterial roadways to avoid conflicts with residential development. No features (e.g., drainage channels, roadways, etc.) are proposed within the project that would physically divide an established residential neighborhood within the project environs. Therefore, no significant impacts are anticipated and no mitigation measures are required.

*Substantial or extreme land use incompatibility.*

The proposed Coto de Caza Specific Plan Amendment project includes the development of land uses that are compatible with the existing development in the vicinity of the subject property. The single-family residential development proposed for TTM 17325 is oriented in the southerly limits of the Coto de Caza community within PA 10. The property is located east of existing single-family homes along Van Gogh Way within Tract 17245. Access to the seven residential dwelling units proposed within TTM 17325 would be extended from Van Gogh Way to the subject property; however, the nearest residential lot proposed within Tract TTM 17325 would be located approximately 700 feet east of the nearest existing home and would be over 100 feet above the nearest existing development within the Tract 17245. Open space is located north, east and south of the subject property.

Implementation of the proposed project would not result in any significant long-term land use conflicts or incompatibility. As indicated above, the proposed residential development would be consistent with the type and intensity of development that exist within PA 10. The rural residential development would be compatible with the nearby existing residential development. The proposed project must comply with the development guidelines and standards for Rural Residential development as prescribed in the Coto de Caza Specific Plan. The residential development will not conflict with the architectural character in the nearby residential areas and, except for some locations located along the ridgeline trails within the open space of PA 10, the development would generally not be visible from the developed areas within PA 10 (refer to Section 4.5). Therefore, no significant land use impacts are anticipated and no mitigation measures are required.

*Incompatible land uses in an aircraft accident potential area as defined in an airport land use plan.*

The project area is not located within two miles of any existing public airport. John Wayne Airport, which is located approximately 15 miles northwest of the subject property, is the nearest aviation facility. No portion of the project site is located within the accident potential area of such a plan. Further, the subject property is not located within two miles of a public airport, public use airport, or private airstrip. Development of the subject property as proposed would neither affect nor be affected by aircraft operations at such a facility that would generate noise in excess of regulatory standards. Therefore, no significant land use impacts would occur as a result of project implementation and no mitigation measures are required.

#### **4.1.5 Mitigation Measures**

The proposed project is consistent the surrounding development and the intensity of development permitted within Planning Area 10. In addition, the proposed project is also consistent with the County's General Plan and relevant policies and complies with the requirements prescribed for a minor amendment to the HCP. No mitigation measures are required.

#### **4.1.6 Level of Significance after Mitigation**

No significant unavoidable impacts will occur as a result of project implementation.



## 4.2 DRAINAGE AND HYDROLOGY

The firm of CSL Engineering, Inc., prepared "Preliminary Hydrology and Hydraulic Calculations for Tentative Tract 17325" (January 11, 2010). The study presented the off-site and on-site hydrology for the 10- and 100-year storms for both the existing (i.e., undeveloped) condition and the post-development condition. The hydrology calculations presented in the study are based on the Orange County Hydrology Manual (1986), and utilize the Rational Method reflected in Section D of the manual as the method of calculating the various runoff coefficients (Qs). Other assumptions utilized in the preparation of the hydrology and hydraulic study are identified in the study, which has been included in the Draft EIR as Appendix B. The findings and recommendations of that report are summarized in this section. Relevant information related to drainage and hydrology and water quality presented in Final EIR No. 401 have also been summarized and incorporated by reference where noted.

In addition to the hydrology and hydraulic report prepared for the proposed project, a Preliminary Water Quality Management Plan (WQMP) was prepared by Robert M. Beers, P.E. The recommendations presented in the WQMP are also summarized in this section. The WQMP is included as Appendix C.

### 4.2.1 Existing Conditions

#### Regional Hydrology

The project site is located within the drainage area of Cañada Gobernadora, a tributary drainage within the San Juan Creek watershed. San Juan Creek is a 29-mile long stream in southern Orange County that consists of a catchment basin encompassing 133.9 square miles. The Santa Ana Mountains occupy most of the north, east, and south parts of the watershed, while the San Joaquin Hills and one of their small sub-ranges border the watershed on the southwest, east, and northwest. San Juan Creek is considered as part of the 500-square mile San Juan Hydrologic Unit, which is a coastal region extending from central-south Orange County to the north extent of San Diego County. In addition to Cañada Gobernadora, San Juan Creek is comprised of several tributary sub-watersheds, all of which drain in a generally southerly direction to join San Juan Creek prior to its discharge into the Pacific Ocean in Dana Point.

As indicated in Final EIR No. 401, the Cañada Gobernadora sub-watershed, which encompasses approximately 11 square miles, originates at the northern boundary of Coto de Caza and extends for a distance of approximately eight miles before joining San Juan Creek above San Juan Capistrano to the south. The Cañada Gobernadora drainage course forms the principal drainage feature of Coto de Caza, extending through the main valley floor as illustrated in Exhibit 3.7 in EIR No. 401. Natural surface flows within the drainages courses on-site are primarily attributed to rainfall and storm runoff during the winter and spring. Due to the presence of numerous springs and seeps, a small amount of surface water is present throughout the year within the Cañada Gobernadora and in some of the larger tributary canyons. Flows within the Cañada Gobernadora are augmented by landscape irrigation runoff from the existing development within the watershed.

#### Drainage/Hydrology

The existing property is undeveloped open space, largely covered with coastal sage scrub, groupings of coastal live oak trees, chaparral, and annual grasses. It is estimated that the property's existing percentage coverage is in the range of 75 to 90 percent. The subject property is characterized by several small drainages that convey surface flows. The existing property is divided into several drainage subareas encompassing approximately 53.2 acres.

Natural drainage through the majority of the project site and adjacent areas occurs generally to the west and south through the subject property and is ultimately directed to storm drain facilities in Van Gogh Way and in Vista Del Verde located west of the project site; however, the surface flow in the northernmost drainage area is directed to the north and then west where it is intercepted by the existing facilities in Vista Del Verde. Existing 10-year storm flows ( $Q_{10}$ ) generated within the affected drainage sub areas total 81.1 cubic feet per second (cfs). The  $Q_{100}$  storm flow for the project site is estimated to be 130.0 cfs in the undeveloped condition.

### Flooding

Since the project site is located within the Coto de Caza area, which at the upper end of a secondary watershed system, large flood flow volumes typically are not generated before the southerly limits of the larger community are reached. As a result, a narrow floodplain was defined for the project area. Although the 100-year floodplain limits for Cañada Gobernadora represent a primary flood hazard, no portion of the subject property is located within the floodplain, as revealed in Exhibit 3.7 in Final EIR No. 401.

### Water Quality

The quality of surface water and groundwater within the Cañada Gobernadora watershed is dependent upon the chemical makeup of the sediments over which runoff passes and through which it percolates, as well as the composition of storm waters discharging from existing developed and landscaped areas.

The Cañada Gobernadora, which is part of the San Juan Creek Watershed, is located within the jurisdiction of the San Diego Regional Water Quality Control Board (SDRWQCB), which has placed San Juan Creek under the Laguna subunit of the San Juan Hydrologic Basin. The Water Quality Control Plan (Basin Plan) also lists the San Juan Creek, Trabuco and Oso Creeks and other tributary drainages, including Cañada Gobernadora as receiving waters. The following existing beneficial uses are designated in the Basin Plan for the Hydrologic Unit Basin No. 1.24 (i.e., Cañada Gobernadora):

- AGR (Agricultural Supply)

Includes uses of water for farming, horticulture, or ranching including, but not limited to irrigation, stock watering, or support of vegetation for range grazing.

- COLD (Cold Freshwater Habitat)

Includes uses of water than support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

- IND (Industrial Services Supply)

Includes uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

- REC1 (Contact Water Recreation)

Includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses including, but are not limited to, swimming, wading, water skiing, skin and scuba diving, white water activities, fishing, or use of natural hot springs.

- **REC2 (Non-Contact Water Recreation)**

Includes uses of water for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beach combing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

- **WARM (Warm Freshwater Habitat)**

Includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

- **WILD (Wildlife Habitat)**

Includes uses of water than support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates, etc.), or wildlife water and food sources.

San Juan Creek is listed in Category 5 of the 2010 Clean Water Act Section 303(d)/305(b) Integrated Report for the San Diego Region. The pollutants of concern for which the receiving waters are listed as “impaired” in the Integrated Report include:

- Dichlorodiphenyldichloroethylene (DDE)
- Indicator Bacteria
- Phosphorus
- Selenium
- Total Nitrogen as N
- Toxicity

Under Section 303(d) of the 1972 Clean Water Act, states, territories, and authorized tribes are required to develop a list of water quality limited segments. These waters do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water quality impairment on the list and develop actions plans, referred to as Total Maximum Daily Loads (TMDLs), to improve water quality.

#### **4.2.2 Significance Criteria**

Implementation of the proposed project would result in a significant adverse environmental impact if any of the following occurs as a result of project implementation.

- Substantial and adverse increased inundation, sedimentation and/or damage from water forces to the subject project and/or other properties are caused by improvements such as grading, construction of barriers or structures.
- Development within the 100-year flood plain as delineated by FEMA that would expose people and/or property to potential serious injury and/or damage.
- Impervious surfaces increase and/or divert storm water runoff that result in the inability of the existing collection and conveyance facilities to accommodate the increased flows.

- Project implementation will cause a violation of water quality objectives and impede the existing beneficial uses of on-site surface waters or off-site coastal waters.
- A usable groundwater aquifer for municipal, private, or agricultural purposes is substantially and adversely affected by depletion or recharge.
- Storm water and/or induced runoff mixes with a tidal habitat or pond causing instability to the existing water quality (e.g., reduction of salinity, increase of dissolved solids, introduction of sediments, etc.) that, in turn, substantially and adversely affects the habitat.
- Sediments are increased and/or diverted by proposed improvements and cause sediment deposition in sensitive habitat areas (e.g., riparian, etc.) to the detriment of the habitat and/or sensitive species.

#### 4.2.3 Standard Conditions

SC 4.2-1 Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or prior to the issuance of any grading permits, whichever comes first, the following drainage studies shall be submitted to and approved by the Manager, Permit Services:

1. A drainage study of the project including diversions, off-site areas that drain onto and/or through the project, and justification of any diversions; and
2. When applicable, a drainage study evidencing that proposed drainage patterns will not overload existing storm drains; and
3. Detailed drainage studies indicating how the project grading, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water retarding, will allow building pads to be safe from inundation from rainfall runoff which may be expected from all storms up to and including the theoretical 100-year flood.

SC 4.2-2 Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or prior to the issuance of any grading permits, whichever comes first, the applicant shall in a manner meeting the approval of the Manager, Permit Services:

1. Design provisions for surface drainage; and
2. Design all necessary storm drain facilities extending to a satisfactory point of disposal for the proper control and disposal of storm runoff; and
3. Dedicate the associated easements to the County of Orange, if determined necessary.

Prior to the recordation of a subdivision map (except maps for financing and conveyance purposes only) or prior to the issuance of any certificates of use and occupancy, whichever occurs first, said improvements shall be constructed in a manner meeting the approval of the Manager, Construction.

- SC 4.2-3 Prior to the issuance of any grading or building permits, the applicant shall submit for review and approval by the Manager, Inspection Services Division, a Water Quality Management Plan (WQMP) specifically identifying Best Management Practices (BMPs) that will be used onsite to control predictable pollutant runoff. This WQMP shall identify, at a minimum, the routine structural and non-structural measures specified in the current Drainage Area Management Plan (DAMP). The WQMP must also:
- Address Site Design BMPs (as applicable) such as minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or “zero discharge” areas, and conserving natural areas;
  - Incorporate applicable Routine Source Control BMPs as defined in the DAMP;
  - Include an Operation and Maintenance (O&M) Plan that identifies the mechanism(s) by which long-term O&M of all structural BMPs will be provided.
- SC 4.2-4 Prior to the issuance of any grading or building permits, the applicant shall include in the WQMP the following additional Priority Project information in a manner meeting the approval of the Manager, Inspection Services Division:
- Include post-construction Treatment Control BMP(s) as defined in the DAMP;
  - For applicants relying on Regional Treatment Controls, discuss applicable regional water quality and/or watershed program;
  - Include a Operation and Maintenance (O&M) Plan that (1) describes the long-term operation and maintenance requirements for post-construction Treatment Control BMP(s); (2) identifies the entity that will be responsible for long-term operation and maintenance of the referenced Treatment Control BMP(s); and (3) describes the mechanism for funding the long-term operation and maintenance of the referenced Treatment Control BMP(s).
- SC 4.2-5 Prior to the issuance of a certificate of use and occupancy, the applicant shall demonstrate compliance with the WQMP in a manner meeting the satisfaction of the Manager, Inspection Services Division, including:
- Demonstrate that all structural Best Management Practices (BMPs) described in the project’s WQMP have been implemented, constructed and installed in conformance with approved plans and specifications;
  - Demonstrate that the applicant has complied with all non-structural BMPs described in the project’s WQMP;
  - Submit for review and approval an Operations and Maintenance (O&M) Plan for all structural BMPs for attachment to the WQMP;
  - Demonstrate that copies of the project’s approved WQMP (with attached O&M Plan) are available for each of the incoming occupants;
  - Agree to pay for a Special Investigation from the County of Orange for a date (12) twelve months after the issuance of a Certificate of Use and Occupancy for the project to verify compliance with the approved WQMP and O&M Plan; and

- Demonstrate that the applicant has agreed to and recorded one of the following: 1) the CC&R's (that must include the approved WQMP and O&M Plan) for the project Home Owner's Association; 2) a water quality implementation agreement that has the approved WQMP and O&M Plan attached; or 3) the final approved Water Quality Management Plan (WQMP) and Operations and Maintenance (O&M) Plan.

- SC 4.2-6 Prior to the issuance of any grading or building permits, the applicant shall demonstrate compliance under California's General Permit for Stormwater Discharges Associated with Construction Activity by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number or other proof of filing in a manner meeting the satisfaction of the Manager, Permit Services. Projects subject to this requirement shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). A copy of the current SWPPP shall be kept at the project site and be available for County review on request.
- SC 4.2-7 Prior to the issuance of any grading or building permit, the applicant shall submit a Erosion and Sediment Control Plan (ESCP) in a manner meeting approval of the Manager, Permit Services, to demonstrate compliance with local and state water quality regulations for grading and construction activities. The ESCP shall identify how all construction materials, wastes, grading or demolition debris, and stockpiles of soil, aggregates, soil amendments, etc. shall be properly covered, stored, and secured to prevent transport into local drainages or coastal waters by wind, rain, tracking, tidal erosion or dispersion. The ESCP shall also describe how the applicant will ensure that all BMP's will be maintained during construction of any future public right-of-ways. A copy of the current ESCP shall be kept at the project site and be available for County review on request.
- SC 4.2-8 Prior to issuance of grading or building permits, drainage studies that demonstrate the following shall be submitted to and approved by Manager, Permit Services:
1. All surface runoff and subsurface drainage directed to the nearest acceptable drainage facility, via sump pumps if necessary, as determined by the Manager, Permit Services.
  2. Drainage facilities discharging onto adjacent property shall be designed to imitate the manner in which runoff is currently produced from the site and in a manner meeting the satisfaction of the Manager, Permit Services. Alternatively, the project applicant may obtain a drainage acceptance and maintenance agreement, suitable for recordation, from the owner of said adjacent property. All drainage facilities must be consistent with the County of Orange Grading Ordinance and Drainage Manual.

#### **4.2.4 Potential Impacts**

##### **4.2.4.1 Short-Term Construction Impacts**

###### **Water Quality**

The site is under the jurisdiction of the California Regional Water Quality Control Board (RWQCB) for issues related to water quality. As previously indicated, each of the nine California RWQCBs is responsible for adopting and implementing water quality control plans for each basin's water bodies, regulating waste discharges from both point and non-point sources, and monitoring permit compliance within its designated basin. Development of the subject property as proposed will result in substantial landform alteration and a change in the existing drainage conditions on the site. Exposure of the site during grading could result in an increase in erosion that could adversely affect water quality. In addition, the construction of parking lots and other circulation features that accommodate automobiles could also contribute to an increase in hydrocarbon and other pollutant discharges into the surface and ground water features.

Site grading and construction activities that occur as a result of project implementation may result in short-term increases in silt and sediment transport as well as hydrocarbon-based pollutants to downstream locations. However, implementation of the BMPs prescribed in the SWPPP and WQMP that must be prepared for the proposed residential project will ensure that the construction-related impacts resulting from site grading will minimize the amount of silt and sediment that is transported to downstream locations. These potential impacts will be avoided or reduced through the implementation of appropriate BMPs as prescribed in the Orange County DAMP and in the standard conditions previously identified. These measures will be implemented during grading and construction activities. In addition, other standard conditions (e.g., compliance with applicable building code requirements) will further minimize construction-related impacts. Therefore, implementation of the proposed 7-unit residential development will not have a significant effect on water quality as a result of silt and sediment transport.

Although it is anticipated that the concentration of urban pollutants in storm runoff from the grading and construction activities associated with project implementation could increase during the construction phase, the runoff would be controlled through applicable BMPs to minimize discharges of pollutants, including siltation associated with erosion resulting from grading activities. Further, once construction activities are completed, these impacts will cease.

##### **4.2.4.2 Long-Term Operational Impacts**

###### **Drainage/Hydrology**

Implementation of the proposed project will directly affect approximately 8 acres, or about 6.3 percent of the 126.51-acre property. The site, which has been designed to accommodate the seven single-family residential lots and the private streets, will retain the same drainage patterns that occur in the undeveloped conditions; however, the drainage areas encompassing the developed portion of the site encompass a larger area of the site (54.5 acres) when compared to the actual development area directly affected by grading.

The drainage patterns over most of the developed portions of the site will continue to flow generally to the south and west as in the natural condition. Most of the post-development surface flows will be directed to the two proposed roadways that provide access to the seven residential dwelling units. As indicated above, project implementation will result in an increase in the amount of impervious area, which will result in an increase in the amount of surface runoff generated on the project site. In the developed condition, the  $Q_{10}$  runoff is estimated to be 85.6 cfs, compared to the 81.1 cfs in the natural condition (i.e., 5.5 percent increase in the volume). The  $Q_{100}$  flow is projected to increase by 6.8 cfs to 136.8 cfs (5.2 percent increase) compared to the volume of 130.0 cfs in the natural condition.

Surface runoff from the project site is expected to drain into San Juan Creek. The proposed site development is considered a priority project in the San Diego Region of Orange County. All priority projects in this region will be required to meet interim hydromodification control requirements prescribed in Order No. R9-2009-0002. As required by the County, the project will be required to provide an Hydrology and Hydraulics report with complete details of any proposed detention facilities to assure that: (1) the proposed peak discharges will be less than or equal to the existing condition and (2) the outlet discharges from the proposed drainage facilities will not cause erosion/scour on the project site and downstream properties. These requirements, which are prescribed by the County in SC 4.2-1 and SC 4.2-2, will ensure that increases in surface runoff from the site and peak discharges are less than significant. In addition, adherence to the NPDES MS-4 requirement to retain runoff on-site, will ensure that the increase in surface flow associated with project implementation will not result in significant impacts to the hydrologic regime. The proposed project will be designed to retain the increase surface flow in excess of the existing 100year storm flow on site, within the proposed building footprint. Therefore, no significant impacts are anticipated and no mitigation measures are required.

#### 100-Year Flood Plain

As indicated in Section 4.2.1, no portion of the subject property is located within the limits of a 100-year floodplain as delineated by FEMA. Therefore, project implementation will not result in potentially significant flooding impacts caused by flooding along San Juan Creek. No mitigation measures are required.

#### Water Quality

Site development as proposed would result in coverage of the property with impervious surfaces that will not only change the runoff characteristics of the subject property but also change the quality of surface runoff exiting the site. Both the types and concentrations of pollutants in runoff will change and/or increase as the site is developed. The major pollutants found in runoff from urban areas include bacteria and viruses, pesticides, trash and debris, sediment, nutrients and oxygen-demanding substances (from landscape fertilizers), and heavy metals and petroleum hydrocarbons (from automobile exhaust and oil drippings). The issue of urban pollutants in stormwater runoff will be addressed through the County and State's existing requirements for new development through the implementation of Best Management Practices (BMPs), as required by the NPDES permit under which the County of Orange operates (refer to SC 4.2-3 through SC 4.2-8). It is anticipated that implementation of the requisite BMPs will ensure that potentially significant impacts to both surface and groundwater quality will be avoided.

A Preliminary WQMP has been prepared for the proposed project that addresses the following potential stormwater and/or urban runoff pollutants:

- pathogens from food waste, animal waste, etc.
- heavy metals from vehicles
- nutrients from landscaping
- pesticides from landscape maintenance
- organic compounds, including petroleum hydrocarbons from vehicles
- sediments from landscaping
- trash and debris from general litter
- oxygen-demanding substances from landscaping
- oil and grease from uncovered parking areas



### Best Management Practices

As indicated in the hydrology analysis, the majority of the subject property will remain in a natural condition (i.e., open space). The WQMP includes several best management practices (BMPs), including Site Design BMPs, Routine Non-Structural BMPs and Routine Structural BMPs. The BMPs that will be incorporated into the project design are described below.

#### Site Design BMPs

Site design BMPs are summarized in Table 4.2-1. As indicated in the table, the project will maximize the permeable area provided on-site within each residential lot by providing landscape areas along the site perimeter. Opportunities to maximize site infiltration will also be incorporated through the use of infiltration trenches, and directly connection roof runoff to underground pipes and infiltration. Other water quality features include the use of open-jointed paving materials or permeable surfaces (e.g., pervious concrete, porous asphalt, unit pavers, and granular materials) for on-site walkways, trails, patios, driveways, and on-site parking areas. In addition, street widths have been reduced to minimize the impervious areas within the project. The project shall also incorporate native or drought tolerant trees.

**Table 4.2-1**

**Site Design BMPs  
Coto de Caza Specific Plan Amendment**

Best Management Practice	Included		If No, State Justification
	Yes	No	
Minimize Directly Connected Impervious Areas (CDIs) (C-Factor Reduction)	X		
Create Reduced or “Zero Discharge” Areas (Runoff Volume Reduction) <sup>1</sup>	X		
Minimize Impervious Area/Maximize Permeability (C-Factor Reduction) <sup>2</sup>	X		
Conserve Natural Areas (C-Factor Reduction)	X		
<sup>1</sup> Detention and retention areas incorporated into landscape design provide areas for retaining and detaining stormwater flows, resulting in lower runoff rates and reductions in volume due to limited infiltration and evaporation. Such Site Design BMPs may reduce the size of Treatment Control BMPs. <sup>2</sup> The “C Factor” is a representation of the ability of a surface to produce runoff. Surfaces that produce higher volumes of runoff are represented by higher C Factors. By incorporating more pervious, lower C Factor surfaces a development, lower volumes of runoff will be produced. Lower volumes and rates of runoff translate directly to lowering treatment requirements.			
SOURCE: Preliminary Water Quality Management Plan (February 5, 2010)			

#### Routine Non-Structural BMPs

All source control BMPs listed for specific land use/type of project identified in the Orange County DAMP that have been included in the proposed project are identified in Table 4.2-2 (Routine Non-Structural BMPs) and As indicated in Table 4.2-2, only BMP Nos. N7, N8, N13, and N14 are not included with the non-structural category because the proposed project does not include the facilities referenced in those BMPs. In addition, BMP No. N6 does not apply. Each of the categories of the non-structural BMPs that are applicable to the

proposed project and that will be implemented are described in greater detail in the Preliminary WQMP, which is available for review at the County of Orange.

**Table 4.2-2**

**Routine Non Structural BMPs  
Coto de Caza Specific Plan Amendment**

BMP No.	Name of BMP	Check One		If Not Applicable, State Reason
		Inc.	N/A	
N1	Education for Property Owners, Tenants and Occupants	X		
M2	Activity Restriction	X		
N3	Common Area Landscape Management	X		
N4	BMP Maintenance	X		
N5	Title 22 CCR Compliance	X		
N6	Local Water Quality Permit Compliance		X	Local Agency does not issue water quality permits.
N7	Spill Contingency Plan		X	No hazardous materials stored on-site.
N8	Underground Storage Tank Compliance		X	No USTs to be located on-site.
N9	Hazardous Materials Disclosure Compliance	X		
N10	Uniform Fire Code Implementation	X		
N11	Common Area Litter Control	X		
N12	Employee Training	X		
N13	Housekeeping of Loading Docks		X	No loading docks to be located on-site.
M14	Common Area Catch Basin Inspection	X		
N15	Street Sweeping Private Streets and Parking Lots	X		
N17 <sup>1</sup>	Retail Gasoline Outlets		X	No retail gasoline outlets to be located on-site.
<sup>1</sup> There is no BMP with the designation N16.  SOURCE: Preliminary Water Quality Management Plan (February 5, 2010)				

**Routine Structural BMPs**

In addition to the non-structural BMPs, the applicant will also be required to install structural BMPs through the construction and development phases of the project. The routine structural BMPs, which are identified in Table 4.2-3, include a variety of County-mandated elements, including trash and waste storage, efficient irrigation systems and landscaping, and slope protection. As previously indicated, the nature and extent of each of the BMPs included in the proposed project are thoroughly described in the Draft WQMP, which is available for review at the County of Orange.

**Table 4.2-3**

**Routine Structural BMPs  
Coto de Caza Specific Plan Amendment**

Best Management Practice	Check One		If not applicable, briefly state reason
	Inc.	N/A	
Provide storm drain system stenciling and signage	X		
Design and construct outdoor material storage areas to reduce pollution introduction	X		
Design and construct trash and waste storage areas to reduce pollution introduction	X		
Use efficient irrigation systems and landscape design	X		
Protect slopes and channels and provide energy dissipation	X		
Incorporate requirements applicable to individual project features			
a. Dock area		X	No dock areas included in this project.
b. Maintenance bays		X	No maintenance bays included in this project.
c. Vehicle wash areas		X	No vehicle wash areas included in this project.
d. Outdoor processing areas		X	No outdoor processing areas included in this project.
e. Equipment wash areas		X	No equipment wash areas included in this project.
f. Fueling areas		X	No fueling areas included in this project.
g. Hillside landscaping	X		
h. Wash water control for food preparation areas		X	No food preparation areas included in this project.
i. Community car wash racks		X	No community car wash areas included in this project.
SOURCE: Preliminary Water Quality Management Plan (February 5, 2010)			

**Treatment Control BMPs**

Table 4.6-4 identifies three treatment BMPs that are proposed for implementation of the seven residential lots within Tentative Tract 17325. These features include vegetated (grass) strips and swales, porous pavement and landscape detention, and an infiltration trench. Other BMPs identified in Table 4.6-7 are not applicable or required.

Table 4.2-4

**Treatment Control BMPs  
Coto de Caza Specific Plan Amendment**

Best Management Practice	Included	
	Yes	No
Vegetated (Grass) Strips	X	
Vegetated (Grass) Swales	X	
Dry Detention Basin		X
Wet Detention Basin		X
Constructed Wetland		X
Detention Basin/Sand Filter		X
Porous Pavement Detention	X	
Porous Landscape Detention	X	
Infiltration Basin		X
Infiltration Trench	X	
Media Filter		X
Proprietary Control Measures		X
SOURCE: Preliminary Water Quality Management Plan (February 5, 2010)		

The treatment BMPs are important in removing contaminants, including bacteria and other pollutants (e.g., heavy metals, petroleum hydrocarbons, etc.) Specifically, the BMPs identified in the Preliminary WQMP that will be incorporated into the project design will result in significant removal rates to ensure that no significant impacts to water quality will occur.

#### 4.2.5 Mitigation Measures

##### Hydrology

**Impact 4.2-1** *The hydrology analysis conducted for the proposed project concluded that project implementation will result in a 100-year storm volume of 136.9 cfs, or an increase of 6.8 cfs over existing conditions (i.e., increase of 5.8 percent).*

**MM 4.2-1** Prior to issuance of a grading permit, the applicant shall comply with the current MS-4 requirement to retain surface flows on-site, subject to the approval of the Manager, Inspection Services Division. Retention/detention facilities shall be located within the proposed development footprint illustrated on TTM17325.

##### Flooding

All of the proposed development (i.e., structures) is proposed to be located outside of the 100-year floodplain as delineated on the current FEMA flood insurance rate map. Therefore, no significant flooding impacts are anticipated and no mitigation measures are required.

### **Water Quality**

The incorporation of BMPs identified in the Preliminary WQMP and which will be incorporated into the Final WQMP (refer to SC 4.2-2) that will be prepared for the proposed project prior to issuance of the grading permit will reduce potential pollutants that enter the surface flows as a result of project implementation to the “maximum extent practicable,” as required by the Regional Water Quality Control Board. As a result, no significant water quality impacts are anticipated and no mitigation measures are required.

#### **4.2.6 Level of Significance After Mitigation**

Implementation of the standard conditions and, specifically, the BMPs prescribed in the SWPPP and WQMP that must be prepared and implementation of the proposed storm drainage system described above will ensure that the potential impacts associated with an increase in surface runoff resulting from development of the proposed residential development are reduced to a less than significant level. No significant unavoidable impacts will occur as a result of project implementation.



## 4.3 BIOLOGICAL RESOURCES

A Habitat Assessment was prepared by Gonzales Environmental Consulting, LLC in 2009 (Revised in 2010) document the baseline environmental conditions and to evaluate the potential impacts of the proposed project on the biological resources, including vegetation and wildlife. As part of the assessment, protocol assessments were also conducted for the coastal California gnatcatcher (*Poliophtila californica californica*) and for the many-stemmed dudleya (*Dudleya multicaulis*) by Gonzales Environmental Consulting, which are presented in “Habitat Assessment & Rare Plant Survey for Special Status Plants (September 25, 2009) and “focused Surveys for California Gnatcatcher” (September 25, 2009). In addition, general wetland assessments of the proposed project were also conducted, which included general mapping of habitat(s) that may be subject to jurisdiction of the U.S. Army Corps of Engineers (ACOE) pursuant to Section 404 of the Clean Water Act and the California Department of Fish and Game (CDFG) Sections 1600-12 of the California Fish and Game Code. Finally, a jurisdictional delineation was undertaken with the findings presented in “Jurisdictional Delineation APN 125-101-02 Community of Coto de Caza,” (July 28, 2010). The findings and recommendations of the habitat assessments and jurisdictional delineation are presented in this section. The 2010 Habitat Assessment/MSHCP Consistency Analysis and Jurisdictional Delineation prepared for the proposed project is included as Appendix D. The other documents referenced above are available for review at Orange County Public Works.

### 4.3.1 Existing Conditions

#### Biological Resources

The terrain of the subject property characterized by marginally steep hills, valleys, and drainage swales. The site generally slopes down from east to west, depending on the location within the landscape. Elevations on the site range from approximately 700 feet to 850 feet above mean sea level (amsl). The site, which encompasses undeveloped open space in the foothills of the Santa Ana Mountains, has been disturbed by anthropogenic (i.e., processes or materials are those that are derived from human activities, as opposed to those occurring in biophysical environments without human influence) disturbances, including off-road vehicular use. Multiple dirt roads traverse the project site, impacting plant and animal habitat.

Land immediately west of the project site contains single-family residences accompanied by many non-native, ornamental landscape plants, especially invasive trees. Construction of new homes continues to the northwest and southwest. Land to the east is currently open space (i.e., Starr Ranch).

#### Vegetation

The project site encompasses several vegetation communities within its 126.51 acres, including coast live oak woodland, coastal sage scrub, valley needlegrass grassland, annual (non-native) grasslands, chaparral, developed, and disturbed areas. Table 4.3-1 provides a summary of the vegetation communities comprising the subject property.



**Table 4.3-1**  
**Vegetation Communities**  
**Coto de Caza Specific Plan Amendment**

<b>Vegetation Community</b>	<b>Area (in Acres)</b>	<b>Percent</b>
Coastal Sage Scrub	66.67	52.70
Annual (Non-native) Grassland	23.26	18.39
Valley Needlegrass Grassland	0.96	0.76
Chaparral	7.26	5.73
Coast Live Oak Woodland <sup>1</sup>	28.36	22.42
<b>Total</b>	<b>126.51</b>	<b>100.0</b>
<sup>1</sup> Includes two unnamed drainages and Engelmann Oak.		
SOURCE: Gonzales Environmental Consulting, LLC (Habitat Assessment and MSHCP Consistency Analysis, Revised January 8, 2010)		

Residential areas consisting of medium density, single-family dwelling units exist west of the project site. Two unnamed drainages extend to and drain into the residential area. In addition to the residential areas noted as “developed” on the vegetation community map (refer to Exhibit 4.3-1), disturbed areas also occur through the project site. Starr Ranch is located on the east side of the project site. Each of the vegetation communities occupying the site is described below.

#### *Coast Live Oak Woodland*

This habitat, which encompasses 28.36 acres (22.4 percent) of the site, is typically found on north-facing slopes and in shaded ravines below 4,000 feet amsl. Coast live oak woodland habitat is typically dominated by the coastal live oak (*Quercus agrifolia*), an evergreen that reaches 10-25 meters in height. The shrub layer is poorly developed, but may include toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes spp.*), laural sumac (*Rhus laurina*), or elderberry (*Sambucus mexicana*). The herb layer is continuous and dominated by brome grass (*Bromus diandrus*) and several other non-native species. Other typical species include California buckeye (*Aesculus californica*), coffee berry (*Rhamnus californica*), poison oak (*Toxicodendron diversilobum*), California sagebrush (*Artemisia californica*), and California laurel (*Umbellularia californica*).

#### *Coastal Sage Scrub*

Coastal sage scrub comprises the largest area (66.67 acres) within the limits of the project site (i.e., 52.7 percent). This vegetation community is represented by several major associations that occur discontinuously from the San Francisco Bay area south to El Rosario in Baja California, Mexico. This habitat is dominated by a characteristic suite of low-saturated, aromatic, drought-tolerant, deciduous shrubs and sub-shrub species. Its composition varies substantially, depending on physical circumstances and the successional status of the vegetation community. Characteristic coastal sage scrub species include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), and several species of sage (e.g., *Salvia mellifera*, *Salvia apiana*). The more open nature of the canopy of coastal sage scrub habitat permits persistence of a diverse herbaceous component to forbs, grasses, and succulents in mature stands than usually is associated with chaparral. It is often mixed with chaparral and grassland communities and the distinct boundaries between each can sometimes be difficult to delineate.

# TENTATIVE TRACT 17325 VEGETATION IMPACT ANALYSIS EXHIBIT FOR KHALDA DEVELOPMENT (COTO DE CAZA ESTATES)

## ON-SITE PERMANENT IMPACT VEGETATION TABULATION BLOCK

VEGETATION AREAS	BASELINE ACREAGE	BASELINE ACREAGE PERCENTAGE OF PROJECT	PERMANENT IMPACT ACREAGE	PERMANENT IMPACT ACREAGE PERCENTAGE OF BASELINE	TEMPORARY IMPACT ACREAGE	TEMPORARY IMPACT ACREAGE PERCENTAGE OF BASELINE	PERMANENT IMPACT ACREAGE	PERMANENT IMPACT ACREAGE PERCENTAGE OF BASELINE	TEMPORARY IMPACT ACREAGE	TEMPORARY IMPACT ACREAGE PERCENTAGE OF BASELINE	PERMANENT IMPACT ACREAGE	PERMANENT IMPACT ACREAGE PERCENTAGE OF BASELINE
ANNUAL GRASSLANDS	23.25 AC	18.0%	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
COASTAL SAGE SCRUB	96.67 AC	77.7%	6.87 AC	7.1%	0.97 AC	1.0%	2.56 AC	2.7%	0.13 AC	0.1%	0.06 AC	0.1%
COASTAL LINE BARK MESQUITE	28.36 AC	22.7%	0.51 AC	0.5%	0.28 AC	0.3%	0.13 AC	0.1%	0.06 AC	0.1%	0.06 AC	0.1%
VALLEY NEEDLEGRASS GRASSLAND	0.86 AC	0.7%	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
INTERMEDIATE MARIPOSA S.L.F.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CHAPARRAL	7.25 AC	5.7%	0.91 AC	12.5%	0.07 AC	0.1%	0.06 AC	0.1%	0.06 AC	0.1%	0.06 AC	0.1%
TOTAL PROJECT AREA = 127 ACRES	127.14 AC	100%	8.35 AC	6.5%	2.80 AC	2.2%	2.75 AC	2.1%	1.25 AC	1.0%	0.18 AC	0.1%

NOTE: THE CHARTERED AND BOUNDARIES SHOWN HEREIN ARE NOT TO BE CONSIDERED AS A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREIN. THE PROJECT BOUNDARY IS SHOWN HEREIN. VEGETATION AREAS OUTSIDE THE LOT "C" BOUNDARY ARE NOT INCLUDED IN THE ABOVE LISTED QUANTITIES.

BY: [Signature] DATE: 11/1/2011

## LOT "C" PERMANENT IMPACT VEGETATION TABULATION BLOCK

VEGETATION AREAS	BASELINE ACREAGE	BASELINE ACREAGE PERCENTAGE OF LOT "C"	PERMANENT IMPACT ACREAGE	PERMANENT IMPACT ACREAGE PERCENTAGE OF BASELINE	TEMPORARY IMPACT ACREAGE	TEMPORARY IMPACT ACREAGE PERCENTAGE OF BASELINE	PERMANENT IMPACT ACREAGE	PERMANENT IMPACT ACREAGE PERCENTAGE OF BASELINE	TEMPORARY IMPACT ACREAGE	TEMPORARY IMPACT ACREAGE PERCENTAGE OF BASELINE
COASTAL SAGE SCRUB	1.85 AC	57.0%	1.47 AC	79.5%	0.22 AC	11.9%	0.21 AC	11.3%	0.21 AC	11.3%
INTERMEDIATE MARIPOSA S.L.F.	0.15 AC	5.1%	0.09 AC	60.0%	0.06 AC	40.0%	0.06 AC	40.0%	0.06 AC	40.0%
TRACT 15245 UNITS OF IMPROVEMENTS	0.09 AC	2.7%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL LOT "C" AREA = 1.3 ACRES	2.09 AC	100%	1.56 AC	74.6%	0.28 AC	13.4%	0.27 AC	12.9%	0.27 AC	12.9%

NOTE: THE CHARTERED AND BOUNDARIES SHOWN HEREIN ARE NOT TO BE CONSIDERED AS A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREIN. THE PROJECT BOUNDARY IS SHOWN HEREIN. VEGETATION AREAS OUTSIDE THE LOT "C" BOUNDARY ARE NOT INCLUDED IN THE ABOVE LISTED QUANTITIES.

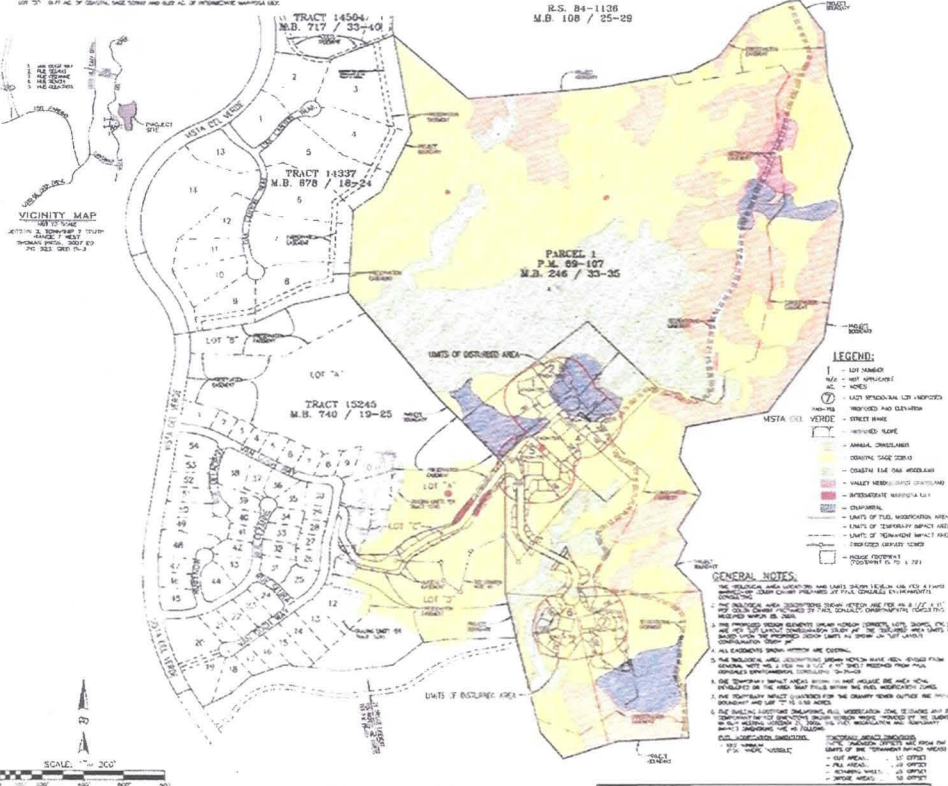


Exhibit 4.3-1  
Existing Vegetation Communities



### Valley Needlegrass Grassland

This mid-height (i.e., to 2 feet) grassland community, which is a special status habitat, encompasses only 0.96 acre (0.8 percent) of the total site area and is dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*). Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover. The habitat is characterized by fine-textured (often clay) soils, moist or even waterlogged during the winter, but very dry in summer. Valley needlegrass grassland often intergrades with oak woodlands on moister, better-drained sites. In the project area, this habitat is determined when there is more than 10 percent cover of purple needlegrass (*Nassella pulchra*). It is typically associated with the annual grasses identified above, leafy bentgrass (*Agrostis pallens*), junegrass (*Koeleria macrantha*), cane bluestem (*Bothriochloa barboidis*), coast range melic (*Melica imperfecta*), and annual forbs such as common goldenstar (*Bloomeria crocea*), blue dicks, Cleveland's goldenstar (*Dodecatheon clevelandii*), smooth cat's ear (*Hypochaeris glabra*), lilac mariposa lily (*Calochortus splendens*), many-stemmed dudleya (*Dudleya multicaulis*), blue-eyed grass (*Sisyrinchium bellum*), and rosin weed (*Calycadenia truncata*).

### Annual (Non-Native) Grassland

Non-native grassland, which typically occurs on fine-textured soils that are moist or wet in the winter and very dry during summer and fall, is characterized by a sparse to dense cover of annual grasses typically up to two feet tall, with many annual wildflowers also present in years with favorable rainfall. This habitat comprises 23.26 acres (18.4 percent) of the total site area. Plant species present typically include wild oat (*Avena* spp.), bromes (*Bromus* spp.), tarweeds (*Centromadia* spp., *Deinandra* spp.), and filarees (*Erodium* spp.). In Orange County, annual grasslands often occur where the native habitat has been disturbed frequently or intensively by grazing, fire, agriculture, or other activities. Annual grasslands in the project area are dominated by bromes (*Bromus madritensis*, *Bromus diandrus*, and *Bromus hordaceus*), wild oats (*Avena barbata*, *Avena fatua*), rat-tail fescue, barleys (*Hordeum* spp.), and Italian ryegrass. Annual forbs include tocolate, common fiddleneck (*Amsinckia menziesii*), popcornflower (*Plagiobothrys* spp.), black mustard (*Brassica nigra*), field mustard (*Brassica rapa*), common catchfly, stickwort (*Spergularia arvensis*), miniature lupine (*Lupinus bicolor*), white-whorl lupine (*Lupinus densiflorus* var. *austocollum*), burclover (*Medicago polymorpha*), bristled clover (*Trifolium hirtum*), red-stemmed filaree, white-stemmed filaree (*Erodium moschatum*), and fluellin (*Kickxia elantine*).

### Chamise Chaparral

Chamise chaparral habitat, which encompasses 7.26 acres (5.7 percent) of the project site, is characterized by a 1-3 meter-tall chaparral overwhelmingly dominated by chamise; associated species contribute little to cover. It is adapted to repeated fires by stump sprouting. Mature stands are densely interwoven with very little herbaceous understory or litter. This chaparral is found on dry soils on xeric (i.e., dry) slopes and ridges and is represented by chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos galuca*), ceanothus (*Ceanothus cuneatus*), scrub oak (*Quercus dumosa*), sugar bush (*Rhus ovata*), white sage (*Salvia apiana*), and chaparral yucca (*Yucca whipplei*).

### Disturbed

Disturbed habitat refers to land that has been permanently altered by previous human activity, resulting in the elimination of all future biological value of the land for most species. The native or naturalized vegetation is no longer present and the land lacks habitat value for sensitive wildlife, including potential raptor foraging. This area is devoid of habitat value. The disturbed areas within the subject property include all dirt roads.

## Wildlife

Wildlife usage of the project site is substantial. The site is surrounded on three sides by open space. Residential development is located to the west, with both people and animals (pets, horses, etc.) roaming freely throughout the area. The presence of free-ranging pets may have suppressed populations of ground-dwelling species on the subject property.

Wildlife species observed or detected during the survey conducted on the subject property are characteristic of those that would be expected to occupy habitats in the region. These species include: coastal California gnatcatcher (*Poliophtila californica californica*), cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), wrentit (*Chamaea fasciata*), greater roadrunner (*Geococcyx californianus*), bushtit (*Psaltirparus minimus*), spotted towhee (*Pipilo erythrophthalmus*), California thrasher (*Toxostoma redivivum*), black-chinned sparrow (*Spizella atrogularis*), grasshopper sparrow (*Ammodramus savannarum*), Savannah sparrow (*Passerculus sandwichensis*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), loggerhead shrike (*Lanius ludovicianus*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*).

Bats occur throughout most of southern California and are using the area as foraging habitat. The gaps in peeling bark and hollow snags or limbs and rock outcroppings provide potential roosting and maternal colony opportunities for bat species.

## Habitat Linkages and Corridors

Wildlife corridors are determined by evaluating several factors, including existing vegetation, topography, proximity of water, and variables of climate such as temperature and precipitation. Because wildlife species vary in their sensitivity to human disturbance, habitat suitability is constrained by disturbance variables such as distance to roads and towns, traffic volumes, hunting status, etc. The project site is bordered by urban development to the west. The drainages onsite may be used as corridors, as evidence of meso-predators was located within the drainage confines and along the dirt roads within the project site.

## Special Status Habitats and Species

Based on the findings of the biological surveys conducted for the proposed project, focused habitat assessments and species-specific surveys were conducted for the following species: coastal California gnatcatcher (*Poliophtila californica californica*), least Bell's vireo (*Vireo bellii pusillus*); southwestern willow flycatcher (*Empidonax traillii extimus*); and many-stemmed dudleya (*Dudleya multicaulis*). In addition, protocol-level surveys were required and conducted for the coastal California gnatcatcher and the many-stemmed dudleya.

Table 4.3-2 identifies the rare, threatened or endangered species and habitats identified on the Cañada Gobernadora U.S.G.S. Quadrangle Map and that may occupy the subject property.

**Table 4.3-2**

### Special Status Habitats and Species Coto de Caza Specific Plan Amendment

Species/Habitat	Federal Status	California Status	CDFG	CNPS
<b>Special Status Wildlife</b>				
Arroyo Toad ( <i>Bufo californicus</i> )	Endangered	Non	SC	
Western Spadefoot ( <i>Spea hammondi</i> )	None	None	SC	
Golden eagle ( <i>Aquila chrysaetos</i> )	None	None	SC	

Species/Habitat	Federal Status	California Status	CDFG	CNPS
Long-eared owl ( <i>Aseo otis</i> )	None	None	SC	
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	Endangered	Endangered	SC	
Coastal cactus wren ( <i>Campylorhynchus brunneicapillus sandiegensis</i> )	None	None	SC	
Coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	Threatened	None	SC	
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	Endangered	Endangered		
Tri-colored blackbird ( <i>Agelaius tricolor</i> )	None	None	SC	
Arroyo Chub ( <i>Gila orcuttii</i> )	None	None	SC	
Yuma Myotis ( <i>Myotis yumanensis</i> )	None	None	SC	
Western redbat ( <i>Lasiurus blossevillii</i> )	None	None	SC	
Pallid bat ( <i>Antrozous pallidus</i> )	None	None	SC	
Western mastiff bat ( <i>Eumops perotis californicus</i> )	None	None	SC	
American badger ( <i>Taxidea taxus</i> )	None	None	SC	
Coast (San Diego) horned lizard ( <i>Phrynosoma coronatum (blainvillii population)</i> )	None	None	SC	
Orange-throated whiptail ( <i>Aspidoscelis hyperythra</i> )	None	None	SC	
Northern red-diamond rattlesnake ( <i>Crotalus ruber ruber</i> )	None	None	SC	
San Diego fairy shrimp ( <i>Branchinecta sandiegonensis</i> )	Endangered	None	SC	
Riverside fairy shrimp ( <i>Streptocephalus woottoni</i> )	Endangered	None	SC	
Special Status Plants				
White rabbit-tobacco ( <i>Pseudognaphalium leucocephalum</i> )	None	None		2.2
Southern tarplant ( <i>Centromadia parryi ssp. australis</i> )	None	None		1B.1
Payson's jewel-flower ( <i>Saulanthus simulans</i> )	None	None		4.2
Coulter's saltbush ( <i>Atriplex coulteri</i> )	None	None		1B.2
Many-stemmed dudleya ( <i>Dudleya multicaulis</i> )	None	None		1B.2
Sticky dudleya ( <i>Dudleya viscida</i> )	None	None		1B.2
San Miguel savory ( <i>Satureja chandleri</i> )	None	None		1B.2
Salt Spring checkerbloom ( <i>Sadalcea neomexicana</i> )	None	None		2.2
Peninsular nolina ( <i>Nolina cismontane</i> )	None	None		1B.2
Thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	Threatened	Endangered		1B.1
Intermediate mariposa lily ( <i>Calochortus weedii var. intermedius</i> )	None	None		1B.2
Special Status Habitat				
Valley Needlegrass Grassland				
Southern Coast Live Oak Riparian Forest				
Southern Cottonwood Willow Riparian Forest				
Southern Mixed Riparian Forest				
Southern Sycamore Alder Riparian				
Riparian Woodland				
Legend:				
CDFG – California Department of Fish and Game				
SC – Species of Concern				
CNPS – California Native Plant Society				
1B – Rare or Endangered in California and elsewhere				
2 – Rare or Endangered in California, more common elsewhere				
3 – Need More Information				
4 – Plants of Limited Distribution				
CNPS New threat code extensions and their meaning				
.1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)				
.2 – Fairly endangered in California (20 – 80% occurrences threatened)				
.3 – Not very endangered in California (,20% of occurrences threatened or no current threats known)				
SOURCE: Gonzales Environmental Consulting, LLC (Habitat Assessment and MSHCP Consistency Analysis. (Revised January 8, 2010)				

### Special Status Plants

Table 4.3-3 summarizes the special status plants and their potential for existing on the subject property. No species identified as occurring on the project site are listed as threatened or endangered. Many-stemmed dudleya is located on the project site and is a CNPS 1B.2 species. Intermediate mariposa lily is also a CNPS 1B.2 species. Although the latter species is not located on the site, it is located in the area that will be disturbed by road construction.

Table 4.3-3

### Special Status Plants Coto de Caza Specific Plan Amendment

Species	Regulatory Status	Potential for Existence On-Site
White rabbit tobacco <i>Pseudognaphalium leucocephalum</i>	CNPS: 2.2	Not observed during flowering period; medium potential for presence on-site.
Southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	CNPS: 1B.1	Not observed during flowering period; low potential for presence on-site.
Payson's jewel flower <i>Caulanthus simulans</i>	CNPS: 4.2	Not observed during flower period; low potential for presence on-site.
Coulter's saltbush <i>Atriplex coulteri</i>	CNPS: 1B.2	Not observed during flowering period; low potential for presence on-site.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	CNPS: 1B.2	Present on-site.
Sticky dudleya <i>Dudleya viscida</i>	CNPS: 1B.2	Not observed during flowering period; low potential for presence on-site.
San Miguel savory <i>Satureja chandleri</i>	CNPS: 1B.2	Not observed during flowering period; low potential for presence on-site.
Salt spring checkerbloom <i>Sidalcea neomexicana</i>	CNPS: 2.2	Not observed during flowering period; low potential for presence on-site.
Peninsular nolina <i>Nolian cismontana</i>	CNPS: 1B.2	Not observed during flowering period; low potential for presence on-site.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	Federal: Threatened State: Endangered	No suitable habitat or soils on-site; presence on-site not expected.
Intermediate mariposa lily <i>Calochortus weedii</i> var. <i>intermedius</i>	CNPS: 1B.2	Not observed during flowering period on-site; however, two small populations found immediately adjacent to the project site. High potential for presence on-site.
<p><u>CNPS – California Native Plant Society</u>            1B – Rare or Endangered in California and elsewhere            2 – Rare or Endangered in California, more common elsewhere            3 – Need More Information            4 – Plants of Limited Distribution</p> <p><u>CNPS New threat code extensions and their meaning</u>            .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)            .2 – Fairly endangered in California (20 – 80% occurrences threatened)            .3 – Not very endangered in California (.20% of occurrences threatened or no current threats known)</p> <p>SOURCE: Gonzales Environmental Consulting, LLC, (Habitat Assessment &amp; Rare Plant Survey for Special Status Plants (September 25, 2010))</p>		

### Special Status Amphibians and Reptiles

Several special status amphibians and reptiles are identified on the Cañada Gobernadora U.S.G.S. quadrangle map, including the arroyo toad, coast range newt, Coronado skink, and western spadefoot toad. In addition, several special status reptile, which are known to occupy scrub communities, species



are also listed. Table 4.3-4 provide a summary of these listed species and their probability to exist on the subject property.

**Table 4.3-4**  
**Special Status Amphibians and Reptiles**  
**Coto de Caza Specific Plan Amendment**

Species	Regulatory Status	Potential for Existence On-Site
<b>Amphibians</b>		
Arroyo toad <i>Bufo californicus</i>	Federal: Endangered California: Species of Special Concern	No potential for this species on-site; no suitable habitat.
Coast range newt <i>Taricha torosa torosa</i>	California: Species of Special Concern	Although appropriate habitat on-site, species was not observed during survey; low potential for presence on-site.
Coronado skink <i>Eumeces skiltonianus interparietalis</i>	California: Species of Special Concern	Although suitable habitat exists on-site, species was not observed during survey (no areas near water); low potential for presence on-site.
Western spadefoot toad <i>Spea hammondi</i>	Federal: Species of Special Concern California: Species of Special Concern	No temporary breeding pools exist and the species was not observed during surveys; low potential for presence on-site.
<b>Reptiles</b>		
Coast patch-nosed snake <i>Salvadora hexalepis virgulata</i>	Federal: Species of Special Concern	Not observed on-site but suitable habitat is present; high potential for presence on-site.
Coastal western whiptail <i>Cnemidophorus tigris multiscutatus</i>	Federal: Species of Concern	Not observed on-site but suitable habitat is present; medium potential for presence on-site.
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	Federal: Species of Special Concern California: Species of Special Concern	Found in the surrounding area and on the project site.
Orange-throated whiptail <i>Cnemidophorus hyperythrus</i>	Federal: Species of Special Concern California: Species of Special Concern	Not observed on-site but suitable habitat is present; high potential for presence on-site.
Rosy boa <i>Charina trivirgata</i>		Not observed on-site but suitable habitat is present; medium potential for presence on-site.
San Diego Mountain king snake <i>Lampropeltis zonata pulchra</i>	California: Species of Special Concern	No potential for this species on-site; no suitable habitat.
San Diego banded gecko <i>Coleonyx variegates abbotti</i>	Federal: Species of Special Concern	Not observed on-site but suitable habitat is present; medium potential for presence on-site.
San Diego horned lizard <i>Phrynosoma coronatum</i>	Federal: Species of Special Concern California: Species of Special Concern	Not observed on-site but suitable habitat is present; medium potential for presence on-site.
San Diego ringneck snake <i>Diadophis punctatus similis</i>		Not observed on-site but suitable habitat is present; medium potential for presence on-site.
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	California: Species of Special Concern	No potential for this species on-site; no suitable habitat.
Two-striped garter snake <i>Thamnophis hammondi</i>	Federal: Species of Special Concern California: Species of Special Concern	Potential habitat on-site; however, not observed during surveys. Low potential for presence on-site.
SOURCE: Gonzales Environmental Consulting, LLC, (Habitat Assessment and MSHCP Consistency Analysis, Revised January 8, 2010)		

### Special Status Birds

Several special status avian species, which occupy a variety of vegetation communities including scrub, grassland, and other open habitat types, have been documented in the vicinity of the project site. These species and their likelihood of occupying the site are summarized in Table 4.3-5.

**Table 4.3-5**  
**Special Status Birds**  
**Coto de Caza Specific Plan Amendment**

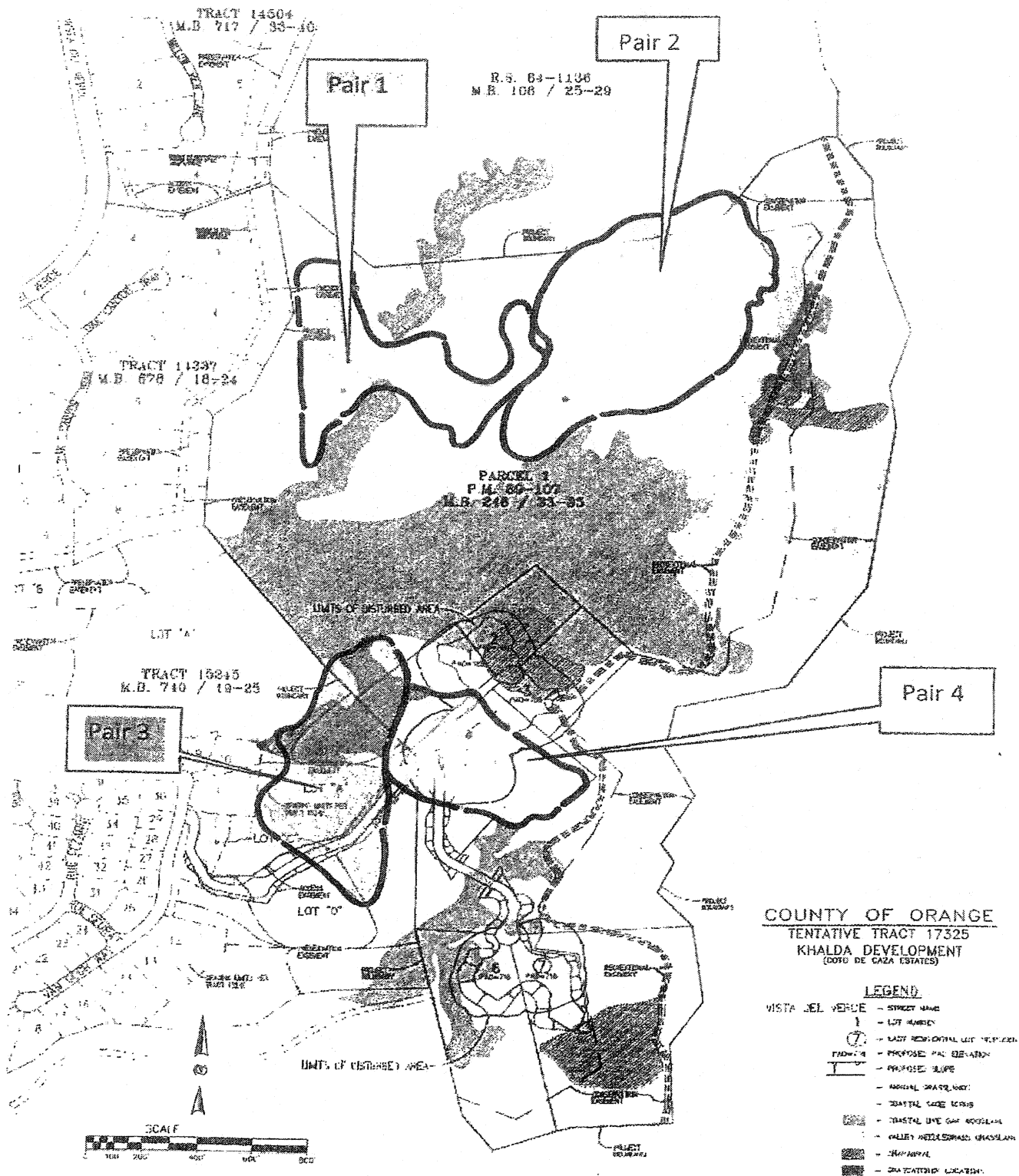
Species	Regulatory Status	Potential for Existence On-Site
Burrowing owl <i>Speotyto cunicularia</i>	Federal: Species of Special Concern California: Species of Special Concern USFWS: Migratory Non-game Bird of Management Concern	Small rodent burrows were located in the study area; however, no signs of burrowing owls were observed at or near the burrows. There is suitable habitat on-site; medium potential for presence on-site.
California horned lark <i>Eremophila alpestris actia</i>	California: Species of Special Concern	Although suitable habitat exists for this species, none were observed during surveys; medium potential for presence on-site.
Coastal cactus wren <i>Camphlorhynchus brunneicapillus</i>	Federal: Species of Special Concern	Although suitable habitat exists for this species, none were observed during surveys; high potential for presence on-site.
Coastal California gnatcatcher <i>Poliophtila californica californica</i>	Federal: Endangered	There is habitat suitable for the species. Four pairs of coastal California gnatcatcher were found on-site.
Cooper's hawk <i>Accipiter cooperii</i>	California: Species of Special Concern	Although suitable habitat exists for this species, none were observed during surveys; medium potential for presence on-site.
Ferruginous hawk <i>Buteo regalis</i>	CDFG: Species of Special Concern USFWS: Bird of Conservation Concern	Although none were observed, the site may provide suitable foraging habitat for the species; medium potential for presence on-site.
Golden eagle <i>Aquila chrysaetos</i>	California: Species of Special Concern Federal: Bird of Conservation Concern	The site may provide suitable foraging habitat for the species; medium potential for presence on-site.
Grasshopper sparrow <i>Ammodramus savannarum</i>	California: Species of Special Concern	Species was not observed during surveys; medium potential for presence on-site.
Least Bell's vireo <i>Vireo bellii pusillus</i>	Federal: Endangered California: Endangered	Species not observed during focused surveys conducted on-site; low potential for on-site presence.
Long-eared owl <i>Asio otus</i>	California: Species of Special Concern	Suitable habitat is present, although none were observed during surveys; medium potential for presence on-site.
Northern harrier <i>Circus cyaneus</i>	California: Species of Special Concern	The site does not provide suitable nesting habitat, although the site may be used for foraging; medium potential for presence on-site.
Southern California rufous-crowned sparrow <i>Aimophila ruficeps</i>	California: Species of Special Concern	None were observed during surveys; medium potential for presence on-site.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Federal: Endangered California: Endangered	None were located or observed during focused surveys on the site; low potential for presence on-site.
Tri-colored blackbird <i>Agelaius tricolor</i>	Federal: Species of Special Concern California: Species of Special Concern	No suitable habitat on-site; no potential for presence on-site.
Western snowy plover	Federal: Threatened	No suitable habitat on-site or in adjacent

Species	Regulatory Status	Potential for Existence On-Site
<i>Charadrius alecandrinus nivosus</i>	California: Species of Special Concern	areas; no potential for presence on-site.
White-faced ibis <i>Plegadis chihi</i>	California: Species of Special Concern	No suitable habitat on-site or in adjacent areas; no potential for presence on-site.
Yellow-breasted chat <i>Icteria virens</i>	California: Species of Special Concern	There are no riparian thickets on-site; low potential for presence on-site.
SOURCE: Gonzales Environmental Consulting, LLC, (Habitat Assessment and MSHCP Consistency Analysis, Revised January 8, 2010)		

The habitat assessment conducted for the coastal gnatcatcher determined that suitable habitat exists on the site (i.e., coastal sage scrub). In addition, four (4) pairs of this species were found on the site or in the immediate project vicinity. The locations of the four pairs and their respective “occupation” areas are illustrated on Exhibit 4.3-2. The survey concluded that vegetation on the project site provides suitable nesting and territorial habitat for the coastal California gnatcatcher. Sage scrub habitat is present and the diversity appears to be adequate to support the species. Therefore, this species is nesting and territorializing on the project site and using immediately adjacent areas. Territories remain basically the same as surveys that were conducted in 2008. Based on a meeting in the field with representatives of the U.S. Fish & Wildlife Service,<sup>1</sup> preference for the preservation/consolidation of open space in the northern portion of the site where gnatcatcher habitat and oak-woodland resources are concentrated was expressed; resource agency officials indicated that development would be appropriate in the southern portion of the project site and would avoid greater impacts to CSS and other sensitive/important habitat.

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<sup>1</sup>The project biologist met with USFWS staff members Ken Cory and Christine Medek on the site on May 13, 2009.



**Exhibit 4.3-2**  
**Locations/Occupation Areas of Coastal California Gnatcatchers**

### Special Status Mammals

Table 4.3-6 summarizes the special status mammal species that have been documented in the project environs.

**Table 4.3-6**  
**Special Status Mammals**  
**Coto de Caza Specific Plan Amendment**

Species	Regulatory Status	Potential for Existence On-Site
American badger <i>Taxidea taxus</i>	California: Species of Special Concern	Low potential for presence on-site.
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	California: Species of Special Concern	Although there is suitable habitat on-site for this species, none were found during surveys; high potential for presence on-site.
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	California: Species of Special Concern	None were observed during field surveys; low potential for presence on-site.
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	California: Species of Special Concern	None were observed during field surveys; medium potential for presence on-site.
Pacific pocket mouse <i>Perognathus longimembris pacificus</i>	Federal: Endangered	No sandy soils on the project site; low potential for presence on-site.
Pallid bat <i>Antrozous pallidus</i>	California: Species of Special Concern	Known to occur in the project study, although not detected during field surveys; high potential for foraging on the project site.
Pocketed free-tail bat <i>Nyctinomops femorasacca</i>	California: Species of Special Concern	Suitable habitat exists on the project site, although the species was not observed during surveys; medium potential for presence on-site.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: Species of Special Concern California: Species of Special Concern	Although not observed during surveys, it is a common inhabitant of sage scrub habitat in the region; high potential for presence on-site.
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: Endangered California: Threatened	No suitable habitat exists on the project site and this species was not observed during surveys; no potential for presence on-site.
Western mastiff bat <i>Eumops perotis californicus</i>	California: Species of Special Concern	There is suitable habitat on-site, although none were found during surveys; medium potential for presence on-site.
Western red bat <i>Lasiurus blossevillei</i>	California: Species of Special Concern	Although none were found during surveys, suitable habitat exists on the project site (oak woodlands); medium potential for presence on-site.
Yuma myotis <i>Myotis yumanensis</i>		No suitable habitat exists on the property; no potential for presence on-site.
SOURCE: Gonzales Environmental Consulting, LLC, (Habitat Assessment and MSHCP Consistency Analysis, Revised January 8, 2010)		

### Fish

Four species of special status fish are known to occur in the project environs, including the arroyo chub (*Gila orcutti*), Santa Ana speckled dace (*Rhinichthys osculus* spp.3), southern steelhead (*Oncorhynchus mykiss irideus*), and tidewater goby (*Eucyclogobius newberryi*); however, no suitable habitat exists on-site for any of these sensitive species.

### *Insects*

The monarch butterfly (*Danaus plexippus*) requires predominantly open country and the presence of milkweeds and dense tree cover. The majority of such sites in California are associated with eucalyptus trees, specifically the blue gum. Although no suitable habitat exists on the project site, there is suitable habitat adjacent to the subject site. There is a low potential for the monarch butterfly to breed on the project site.

### *Invertebrates*

Two federally endangered species of invertebrates known to inhabit pools, ponds, and depressions in the region are the Riverside fairy shrimp (*Streptocephalus woottoni*) and the San Diego fairy shrimp (*Streptocephalus sandiegonensis*); however, because the site does not support suitable habitat for these species, neither species is known to inhabit the site.

### Critical Habitat

The subject property is located within Subarea 3 of the Southern Subregional Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan (NCCP/MSAA/HCP). The NCCP/MSAA/HCP sets forth a proposed Conservation Strategy that would be implemented by the County of Orange in cooperation with state and federal agencies and Participating Landowners in southern Orange County. The proposed NCCP/MSAA/HCP has a strong conservation component that should help protect threatened and endangered species in the future, including:

- Creation of a permanent Habitat Reserve;
- Formulation and implementation of a Habitat Reserve Management Program (HRMP);
- Receipt of State and federal regulatory coverage and provisions for the impacts of proposed Covered Activities<sup>2</sup> on proposed Covered species and CDFG jurisdictional areas; and
- Execution of an Implementation Agreement (IA) and identification of funding necessary to implement the HRMP.

The subject property lies within Linkage F, a “horseshoe” shaped corridor north of the Coto de Caza golf course that provide habitat and connectivity between Upper Chiquita Canyon and Starr Ranch and Casper’s Wilderness Park within Subarea 3 of the Southern Subregion MSAA/HCP.

The Conservation Strategy consists of: 1) Creation of a permanent Habitat Reserve; 2) Formulation and implementation of a Habitat Reserve Management Program (HRMP); 3) Receipt of State and Federal regulatory coverage and provisions for the impacts of proposed Covered Activities on proposed Covered Species and California Department of Fish and Game (CDFG) Jurisdictional Areas; and 4) identification of funding necessary to implement the HRMP (Habitat Reserve Management Program). The Covered Activities consist of those lawful activities undertaken by the County of Orange, RMV, and the SMWD pursuant to the MSAA/HCP.

Currently, local, state, and federal agencies, in cooperation with local landowners, are engaged in coordinated land use and natural resource conservation planning efforts to address future economic development within a 91,000-acre portion of southern Orange County. The three planning processes that have been undertaken and completed include: (1) an amendment to the County’s General Plan and Zone Change for the Rancho Mission Viejo “Ranch Plan;” (2) development of a Special Area

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<sup>2</sup>Covered Activities consist of those lawful activities undertaken by the County of Orange Rancho Mission Viejo, and the Santa Margarita Water District pursuant to the NCCP/MSAA/HCP.

Management Plan/Master Streambed Alteration Agreement (SAMP/MSAA) for the San Juan Creek and San Mateo Creek watersheds; and (3) development of a South County Habitat Conservation Plan (HCP).

### *Subarea 3*

As indicated above, the subject property is in Subarea 3, which is built out except for a few undeveloped private lots located within the Coto de Caza Specific Plan, primarily along the northern edge. The project site lies within Linkage F. Linkage F is a “horseshoe” shaped corridor north of the Coto de Caza golf course that provides habitat and connectivity between Upper Chiquita Canyon and Starr Ranch and Casper’s Wilderness Park. Although this linkage is fragmented, narrow (substantially less than the 2,000-foot-wide [600 meters] Plan goal), and a patchy mosaic of CSS, it still supports many gnatcatcher territories. The patchy CSS habitat also likely provides a route for gnatcatcher dispersal. South of Linkage F, some east-west movement of gnatcatchers may also occur across the Coto de Caza golf course from surrounding supplemental open space (SOS) lands in the vicinity of Via Ortega/Via Coyote. In this area, native scrub habitat that will remain undeveloped is immediately adjacent to either side of a narrow strip of the golf course.

Planning species for which habitat is provided within this linkage include coastal California gnatcatcher and coastal cactus wren. Maintenance of a contiguous connection is important for these species. Management of edge conditions is required to provide movement of gnatcatchers through this linkage. Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators are also required. Barriers, including roadways and fencing constructed as part of adjacent development, may result in fragmentation of the linkage and affect movement through the Linkage by gnatcatchers.

### Jurisdictional Delineation

Three agencies generally regulate activities within streams, wetlands and riparian areas in California. The U.S. Army Corps of Engineers (ACOE) regulates activities under Section 404 of the federal Clean Water Act. The California Department of Fish and Game regulates activities within wetlands under the Fish & Game Code Section 1600; and the Regional Water Quality Control Board (RWQCB) regulates activities under Section 401 of the federal Clean Water Act.

As previously indicated, general wetland assessments of the proposed project site were conducted, which included general mapping of habitat(s) that may be subject to jurisdiction of the ACOE pursuant to Section 404 of the Clean Water Act and the CDFG pursuant to Sections 1600-12 of the California Fish and Game Code. The limits of the ACOE jurisdictional wetlands and waters of the United States were generally based on Section B (“Preliminary Data Gathering and Synthesis” of the ACOE 1987 Wetlands Delineation Manual (ACOE Manual). Routine or comprehensive floral determinations and delineations pursuant to Sections D and E of the ACOE Manual were also conducted. Based on the generalized wetlands assessments, no wetlands exist within the limits of the subject property. In addition, a jurisdictional delineation was also undertaken to determine the nature and extent of federal and state jurisdiction.

Two unnamed drainages (i.e., “blue-lined” streams), which show no ordinary high water mark (OHWM) and which are tributary with adequate flow to Cañada Gobernadora Channel, were identified on the subject property. Both drainages support coast live oak woodland habitat. Both drainages are tributary to relatively permanent water (RPW) in accordance with the Rapanos jurisdictional delineation process and are, therefore, determined to be waters of the United States. Based on that delineation, it was determined that the project site encompasses 2.22 acres of jurisdictional oak woodland habitat, including 0.11 acre of federal jurisdiction and 2.11 acres of state jurisdiction; however, no wetlands exist on the subject property.



These drainages are illustrated on Exhibit 4.3-3. Both drainages are described as “intermittently-exposed freshwater” (circumneutral). They are alluvial washes/woodland (*Quercus agrifolia*) and classified as habitat type No. 22.1.543.5814.<sup>3</sup> The drainage areas are limited by topography and water availability to specific areas. Vegetation differences and bank indicators are clear. The drainages appear as low spots in the topography. Table 4.3-7 summarizes the characteristics of each drainage.

**Table 4.3-7**

**Potential Jurisdictional Areas  
Coto de Caza Specific Plan Amendment**

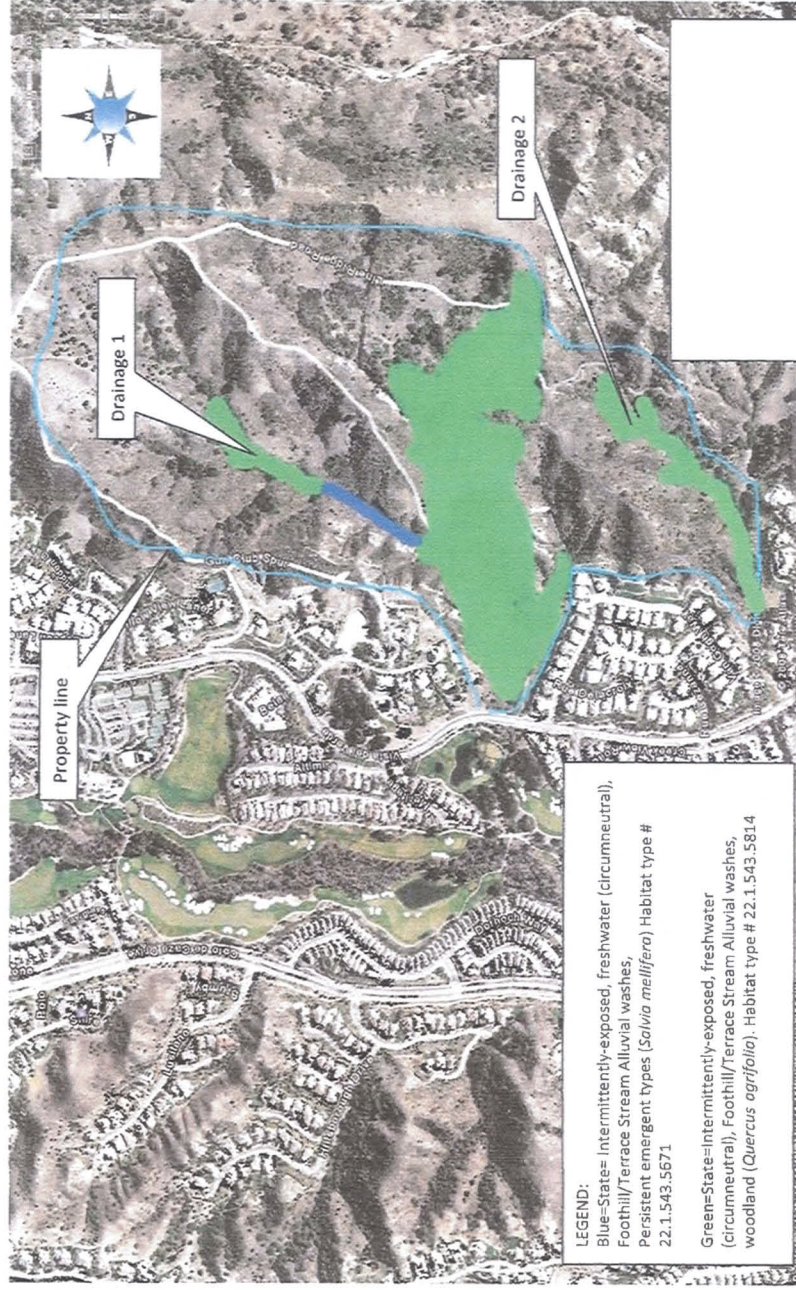
<b>Jurisdiction</b>	<b>Jurisdictional Area (Square Feet)</b>	<b>Acreage</b>
<b>Drainage 1</b>		
State	78,525	1.8
Federal	3,680	0.08
<b>Drainage 2</b>		
State	13,574	0.31
Federal	1,245	0.03
<b>Total</b>		
State	92,099	2.11
Federal	4,885	0.11
SOURCE: Gonzales Environmental Consulting, LLC (July 2010)		

#### 4.3.2 Significance Criteria

Appendix G of the 2010 State CEQA guidelines indicate that a project may be deemed to have a significant effect on the environment if the project is likely to:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (including protections provided pursuant to Section 1600 et seq.).
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

<sup>3</sup> Cowardin, Lewis M., Virginia Carter, Francis Golet, and Edward T. LaRoe. Classification of wetlands and deepwater habitats of the United States. Office of Biological Services, U.S. Fish and Wildlife Service, 1979. FWS/OBS-79/31.



**Exhibit 4.3-3**  
**Jurisdictional Delineation**



- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

#### 4.3.3 Standard Conditions

SC 4.3-1 Prior to the issuance of a grading permit, the project applicant shall retain the services of a qualified ornithologist and shall provide proof to the Manager, General Land Use Planning in the form of a completed survey or assessment. The qualified ornithologist shall conduct a survey of the construction zone, if any of the phased construction activities (grubbing, grading, tree trimming or removal) are to occur during the breeding season for native birds (approximately February 1 through August 31). Proof in the form of a completed survey or assessment shall be submitted to the Manager, General Land Use Planning. The ornithological survey shall occur not more than seven days prior to the initiation of those construction activities. If the ornithologist detects any occupied nests of native birds within the construction zone, they shall be mapped on construction plans and the project applicant will conspicuously flag off the area(s) supporting bird nests, providing a minimum buffer of 200 feet between the nest and limits of construction. (This buffer zone shall be at least 500 feet for raptors until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer be impacted by the project.) The construction crew will be instructed to avoid any activities in the zone until the bird nest(s) is/are no longer occupied, per a subsequent survey by the qualified ornithologist. Alternatively, the project applicant will consult as appropriate with the USFWS to discuss the potential loss of nests of native birds covered by the MBTA to obtain the appropriate permit from the USFWS.

#### 4.3.4 Potential Impacts

##### 4.3.4.1 Short-Term Construction Impacts

Project construction activities do have potential to result in significant indirect impacts to several species. Indirect impacts primarily result from adverse “edge effects,” including short-term indirect impacts related to construction occurring in proximity to biological resources within natural open space. These impacts include those associated with the increase in noise levels that result from the use of construction equipment. During construction, temporary noise impacts have some potential to affect wildlife communication (including bird breeding behavior), foraging, nesting, roosting, and denning activities for wildlife. Sedimentation, siltation, and erosion could also affect water quality in on-site drainages. Pollutant runoff, including chemicals used during construction and machinery maintenance, could contaminate soil and water. In addition, dust generated during the grading and construction phases could also adversely impact habitats and species residing within them (e.g., plant growth and insect activities).

These construction-related, indirect impacts could affect plant growth and insect activity; noise, which could disrupt wildlife communication, including bird breeding behavior; lighting, which could disrupt behavior of nocturnal reptiles, mammals, and raptors; sedimentation, siltation, and erosion, which could affect water quality of on-site streams; and pollutant runoff, including chemicals used during construction and machinery maintenance, which could contaminate soil and water. Therefore, such short-term direct and indirect impacts to threatened or endangered or special status species would be considered potentially significant. The

mitigation measures prescribed in Section 4.3.5 will serve to reduce potential indirect impacts from noise during project construction to less than significant levels.

#### **4.3.4.2 Long-Operational Impacts**

Implementation of the proposed project would result in the direct permanent loss of habitat. The emergent and disturbed habitat supports common native wildlife species that would be directly affected by the removal of the habitat, including common species of reptiles, birds, and small mammals. The more mobile wildlife species such as birds and larger mammals that utilize the affected area will be displaced during clearing activities to adjacent areas. These animals may move to nearby open areas. The less mobile species will probably limit the future use of the area except for common reptile, bird and small mammal species that can be found in urban neighborhoods. The proposed project has been designed to minimize impacts to drainage areas and sensitive habitats. The locations of the lots and roads are intended to minimize impacts to sensitive habitats. Potential long-term direct and indirect impacts are discussed below.

##### Impacts to Vegetation

Direct impacts to vegetation communities consist of ground-disturbing activities (i.e., vegetation removal, grading, paving, building of structures, installation of landscaping, creation of fuel modification zones, etc.). The proposed project has been designed to minimize impacts to sensitive vegetation; however, impacts will occur to coastal sage scrub, chaparral, oak woodland, disturbed, and non-native grassland habitat. Most of these impacts will occur as a result of grading for the lots and roadways by removal of habitat.

Project implementation will result in some grading and landform alteration that will impact the existing vegetation communities, including sensitive habitat (e.g., coastal sage scrub, etc.). Exhibit 4.3-4 illustrates the limits of grading and the extent of impacts within the vegetation communities delineated within the subject property. Table 4.3-8 summarizes the potential temporary and permanent impacts to the existing vegetation resulting from grading associated with the seven pads (including the area allocated for fuel modification) necessary to accommodate the single-family residential dwelling units proposed in Tentative Tract 17325. In addition to these impacts to vegetation, potential impacts resulting from grading required for the extension of the access road through Lot "C" are also reflected in Table 4.3-8.

**Table 4.3-8**  
**Impacts to Vegetation Communities**  
**Coto de Caza Specific Plan Amendment**

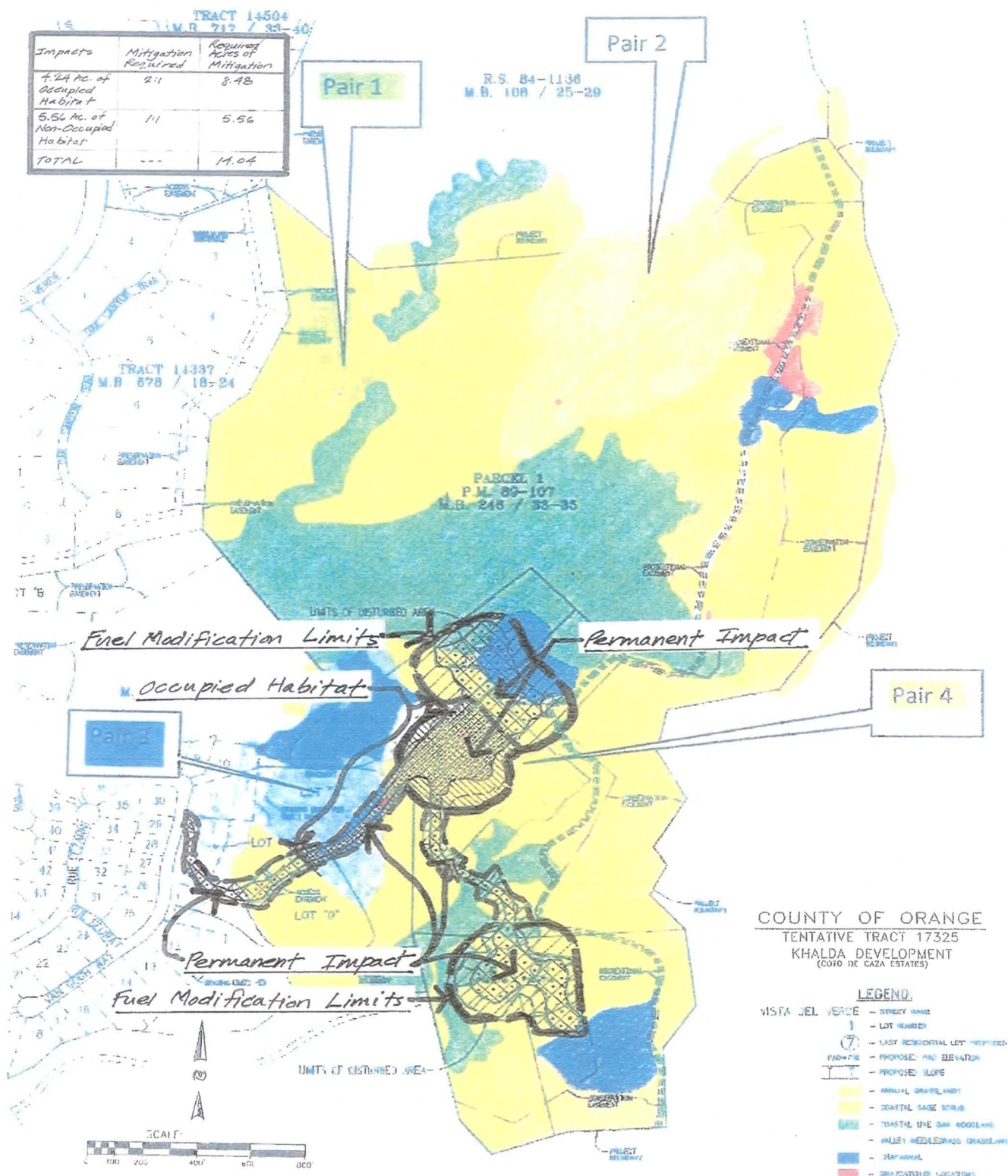
<b>Vegetation Community</b>	<b>Existing Acres</b>	<b>Permanent Impact<sup>1</sup> (Acres)</b>	<b>Temporary Impact<sup>2</sup> (Acres)</b>	<b>Fuel Modification (Acres)</b>	<b>Remaining Acres</b>
<b>Tentative Tract 17325</b>					
Annual Grassland	23.26	0	0	0	23.26
Coastal Sage Scrub	66.67	6.87	0.92	2.55	56.33
Coastal Live Oak Woodland	28.36	0.51	0.28	0.13	27.44
Valley Needlegrass Grassland	0.96	0	0	0	0
Chaparral	7.26	0.91	0.07	0.96	5.3
<b>Sub-Total – TTM 17325</b>	<b>126.51</b>	<b>8.29</b>	<b>2.6</b>	<b>2.33</b>	<b>113.29</b>
<b>Lot “C”</b>					
Coastal Sage Scrub	1.65	1.42	0.22	N/A	0.01
Intermediate Mariposa lily	0.15	0.09	0.06	N/A	0
<b>Sub-Total – Lot “C”</b>	<b>1.80</b>	<b>1.51</b>	<b>0.28</b>	<b>N/A</b>	<b>0.01</b>
<b>Total – TTM 17325 and Lot “C”</b>	<b>128.31</b>	<b>9.8</b>	<b>2.88</b>	<b>2.33</b>	<b>113.30</b>
<sup>1</sup> Areas that would be permanently altered as a result of development and/or impervious surfaces. <sup>2</sup> Areas subject to grading that will be revegetated.  <b>SOURCE:</b> Gonzales Environmental Consulting, LLC, (Habitat Assessment and MSHCP Consistency Analysis, Revised January 8, 2010)					

#### Impacts to Critical Habitat

As illustrated in Exhibit 4.3-4 and indicated in Table 4.3-7, the grading and landform alteration required to implement the proposed project will avoid the annual grassland and valley needlegrass grassland habitats occupying the subject site; no permanent or temporary impacts to either vegetation community will occur. However, project implementation will result in the permanent removal of 12.13 acres of coastal sage scrub habitat (18.2 percent of the total coastal sage scrub vegetation within TTM 17325 and Lot “C”) and temporary impacts to 2.88 acres (4.3 percent to the total) of coastal sage scrub habitat. In addition, the proposed project will also result in the permanent loss of 0.64 acre of coastal live oak woodland (2.26 percent of the on-site habitat) and temporary impacts to 0.28 acre (0.99 percent) of that habitat. Impacts to the chaparral vegetation community include 1.87 acres (25.76 percent of the total) of permanent loss and 0.07 acre (0.96 percent of the total) of temporary impacts to the chaparral community. These direct impacts are significant and will require mitigation in the form of replacement (i.e., revegetation and/or enhancement of existing habitat) or dedication of equivalent or superior habitat.







**Exhibit 4.3-4**  
**Project-Related Impacts**



In accordance with the NCCP/HCP requirements, replacement of the lost habitat would occur at a 1:1 ratio (i.e., for each acre of impacted habitat, one acre of replacement habitat is required on-site). However, as previously indicated, four (4) pairs of coastal California gnatcatchers occupied the 127-acre portions of the property and adjacent areas, including Lot "C." Because the subject property supports the gnatcatcher, the loss of the CSS habitat may be considered to be a "take" under the Federal Endangered Species Act (FESA), which requires additional mitigation. Existing NCCP requirements prescribe a replacement ratio of two acres of replacement habitat for each acre of impacted occupied CSS habitat. Therefore, project implementation will require the replacement of 24.26 acres of CSS habitat on-site. The temporary impacts to CSS habitat resulting from manufactured slopes would be revegetated with CSS habitat, or dedication of equivalent or superior habitat area.

#### Impacts to Special Status Plants

Project implementation may result in impacts to both the many-stemmed dudleya and intermediate Mariposa lily, which are located on the subject property and in Lot "C" (i.e., proposed roadway), respectively. Like other rain-dependent plants, these species are susceptible to damage from ground disturbance activities (e.g., grading for site preparation, fire abatement, etc.). Table 4.3-6 identifies the potential project-related impacts to the intermediate Mariposa lily, a CNPS 1B.2 species (i.e., rare or endangered in California or elsewhere; fairly endangered in California). As indicated, grading and extension of the access road through Lot "C" will result in the permanent loss of 0.09 acre (60 percent) and temporary loss of the remaining 0.06 acre (40 percent) of this species located within the limits of the access roadway. These impacts, like those occurring to the many-stemmed dudleya, are significant and must also be mitigated through a revegetation program.

In addition to these potential impacts to sensitive plant species, impacts to white rabbit tobacco, a CNPS 2.2 species (rare or endangered in California, more common elsewhere; fairly endangered in California) may also occur due to its medium potential to occur on the site. Impacts to this species should be avoided. Although any potential impacts to white rabbit tobacco would be considered adverse but would not be significant under CEQA due to the large distribution and number of locations of this species.

#### Impacts to Special Status Animals

As previously indicated, implementation of the proposed project would result in the direct permanent loss of habitat. The emergent and disturbed habitat supports common native wildlife species that would be directly affected by the removal of the habitat. This would include common species of reptiles, birds, and small mammals. The more mobile wildlife species, such as birds and larger mammals that utilize the affected area will be displaced during clearing activities to adjacent areas. These animals may move to open adjacent properties. The less mobile species will probably be lost during the habitat clearing and grading. It is anticipated that construction of the project would likely limit the future use of the area except for common reptile, bird and small mammal species that can be found in urban neighborhoods. The proposed project has been designed to minimize impacts to drainage areas and sensitive habitats. The location of the lots and roadways is designed to eliminate impacts to sensitive habitats.

Anticipated impacts to most sensitive wildlife species would be relatively minor, for the following reasons: (a) most of the potentially impacted species are Species of Special Concern; (b) a great portion of the project area is already disturbed by the existing equestrian trails and surrounding developments; and (c) the threatened/endangered species that occur in the project area would be avoided.

Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered a take of the coastal California gnatcatcher and/or coastal cactus wren and is potentially punishable by fines or imprisonment. As indicated above, project implementation will result in the temporary and permanent loss of coastal sage scrub habitat, necessitating replacement (i.e., mitigation) of that habitat. Because the habitat is occupied, mitigation of impacted CSS is required.

Mitigation of the CSS at a 2:1 ratio as prescribed by the NCCP will adequately mitigate the potential impacts to the coastal California gnatcatcher and coastal cactus wren.

Although no other sensitive wildlife species were observed or are expected to occupy the site, the subject property does provide suitable habitat for the burrowing owl in the form of rodent borrows and there is a “medium” potential for this species to occur onsite. Therefore, project implementation could result in potential impacts to the borrowing owl, necessitating the implementation of mitigation measures to avoid such impacts in the event the species inhabits the site.

#### Other Direct and Indirect Impacts

##### *Noise Impacts*

The proposed project incorporates landscape elements including trees, shrubs, and groundcover, which will assist in noise reduction on the project site. Noise levels created on the project site would be typical of low density residential neighborhoods and would not exceed residential noise standards (i.e., 65 dBA exterior). Therefore, no long-term noise impacts are anticipated to occur as a result of the proposed project.

##### *Urban Pollutants*

The proposed project would result in the additional use of hazardous materials in limited quantities associated with typical residential use. These materials may include cleaning products, solvents, herbicides, and insecticides. However, compliance with regulatory requirements will reduce the potential risk of hazardous material exposure to a less than significant level. The project has been designed to utilize natural drainages to accommodate surface runoff, which could contaminate either surface water or groundwater. In order to ensure that pollutants do not impact these resources, best management practices (BMPs) will be implemented, including filtering storm water prior to discharge into open space areas, etc., in accordance with the Water Quality Management Plan (WQMP) that has been prepared for the project (refer to Section 4.2) and MM 4.3-5.

##### *Night Lighting*

Without proper design, night lighting associated with street lighting, security lighting for the proposed residential dwelling units, and related uses could “spill” into the adjacent open space conservation areas within the subject property, which could adversely affect sensitive species. Therefore, it will be necessary to ensure that all lighting be directed away from open space areas in order to protect species within the area from direct night lighting.

#### Jurisdictional Waters

Project implementation will result in potentially significant impacts to jurisdictional waters of the U.S. and of the State. Table 4.3-9 summarizes the potential impacts anticipated to occur from the proposed project. As indicated in the table, the proposed project would adversely affect 0.89 acre of waters of the State, including 0.28 acre in Drainage 1 and 0.61 acre from Drainage 2). In addition, 0.01 acre of waters of the U.S. in Drainage 2 would be adversely affected by the proposed project; no waters of the U.S. in Drainage 1 would be impacted.

**Table 4.3-9**

**Potential Project-Related Impacts to Jurisdictional Waters  
Coto de Caza Specific Plan Amendment**

<b>Jurisdiction</b>	<b>Jurisdictional Area (Square Feet)</b>	<b>Acreage</b>
<b>Drainage 1</b>		
State	12,000	0.28
Federal	0	0
<b>Drainage 2</b>		
State	26,400	0.61
Federal	619.5	0.01
<b>Total</b>		
State	38,400	0.89
Federal	619.5	0.01
SOURCE: Gonzales Environmental Consulting, LLC (July 2010)		

**Wildlife Movement**

A substantial portion of the subject property will be retained as open space. These open space areas will be managed for the sole purpose of wildlife conservation in perpetuity. The conservation easement that will be granted for the undeveloped portion of the property will prohibit all activities that may kill, injure, or otherwise significantly disturb wildlife or adversely impact their habitat within the easement area. These prohibited activities include, but are not limited to, recreation (e.g., hiking, biking, walking pets, etc.), agriculture, communications tower construction, gardening, dumping of garbage, off-road vehicle use, and construction of roads (other than the equestrian trail and project roads) or other structures. Therefore, project implementation will ensure that wildlife movement through the area is not significantly impacted.

**4.3.5 Mitigation Measures**

**Impact 4.3-1** *Grading necessary to implement the proposed project could result in impacts to the many-stemmed dudleya and intermediate Mariposa lily, which occupy the subject property.*

**MM 4.3-1a** Prior to the issuance of a grading permit, the applicant shall show proof to the County in the form of a completed survey or assessment that populations of the many-stemmed dudleya and intermediate Mariposa lily (if located) have been avoided to the extent possible. If avoidance is not possible, offsite purchase of the mitigation sites shall be researched to determine the feasibility of this option. The mitigation sites shall be open space that contains substantial populations of many-stemmed dudleya and intermediate Mariposa lily (if located). These areas shall be dedicated in perpetuity.

**MM 4.3-1b** If the options in MM 4.3-1a are not feasible, the following mitigation program shall be implemented. To compensate for the loss of many-stemmed dudleya and intermediate Mariposa lily, a plan that provides for the establishment of species by transplantation and seeding shall be developed and implemented by a qualified biologist. The detailed

mitigation plan shall be approved by the appropriate agencies prior to issuance of a grading permit and shall include the following elements.

- Procedures for determining a suitable mitigation site to transplant the plans, bulbs and broadcast lily seeds shall be determined. Field surveys shall be conducted to identify the proposed mitigation site(s) and suitable locations for the transplant effort. Proposed sites should not contain an existing population of the intermediate Mariposa lily. The site shall be marked in the field with stakes and flagging.
- A pre-construction survey shall be conducted by the project biologist during the peak flowering period (approximately March to June). The limits of each impacted location will be clearly delineated with lath and brightly colored flagging. The localities will be monitored once every two weeks, following the end of the flowering period, to determine the suitable time for seed collection. A qualified seed collector will collect all of the seeds from the plants to be impacted when the seeds are ripe. The seeds will be cleaned and stored by a qualified nursery or institution with appropriate storage facilities. Following the seed collection, the bulbs will be dug up and stored by a qualified nursery or institution with appropriate storage facilities. The top 12 inches of topsoil from the plant locations will be scraped, stockpiled, and used in the selected mitigation site.
- Detailed procedures for implementing the transplantation of the many-stemmed dudleya and intermediate Mariposa lily shall be described in the plan, including, but not limited to, trash/weed removal, respreading of native topsoil, soil treatments, irrigation system modification/repair and erosion control.
- Approximately 60 percent of the seeds and bulbs shall be spread/placed at the selected site in the fall following site preparation. Forty (40) percent of the seed and bulbs shall be kept in storage for supplemental planting, in the event of future plant failure.
- A detailed maintenance and monitoring plan shall be developed by a qualified biologist. The plan shall include detailed descriptions of appropriate maintenance measures, monitoring requirements, and annual report requirements. The project biologist shall have full authority to suspend any operation on the mitigation site that is, in the opinion of the qualified biologist's opinion, not consistent with the restoration plan. Any disputes regarding the consistency of an action with the restoration plan shall be resolved by the applicant and biologist.
- The mitigation plan shall provide a series of performance criteria to evaluate the success of the transplantation effort. This shall include requirements for a minimum of 60 percent germination of the number of plans collected. The performance criteria should also include percent cover, density, and seed production requirements. These criteria will be developed by the biologist using a reference population for density. The monitoring period for the impacts shall be five (5) years or until the site is determined a success in coordination with the resources agencies.
- If, after the five-year period, at least 60 percent of the total number of plants removed by the project have not become established at the mitigation site, additional mitigation will be required. If after the five-year period at least 80 percent of the total number of plants removed had not developed on the mitigation site, then the material held in storage shall be reseeded/planted into the mitigation site. The



mitigation effort would be considered successful and no additional monitoring would be required.

**Impact 4.3-2 Grading of the subject property could result in potential impacts to burrowing owls that may occupy the site.**

MM 4.3-2 Prior to the issuance of a grading permit, the applicant shall provide proof in the form of a completed survey or assessment to the Manager, General Land Use Planning, that an experienced burrowing owl biologist shall conduct a pre-construction survey of all on-site rodent burrows, which will be evaluated by the biologist and confirmed as not having any owls in them, not more than 30 days before any landform alteration takes place. The surveys shall be conducted as close to the actual construction initiation date as possible.

**Impact 4.3.3 Grading necessary to implement the proposed project will result in permanent impacts to 12.13 acres of occupied coastal sage scrub habitat. In addition, 2.88 acres of temporary impacts will also occur from grading of slopes associated with project implementation. As a result, project implementation will result in potential impacts to the coastal California gnatcatcher and coastal cactus wren.**

MM 4.3-3a Prior to the issuance of a grading permit, the applicant shall be required to mitigate the 12.13 acres at a ratio of two acres for each acre of occupied coastal sage scrub habitat. Proof shall be provided to the Manager, General Land Use Planning. A minimum of 24.26 acres of coastal sage scrub habitat shall be provided. (The applicant has agreed to dedicate 26.5 acres of coastal sage scrub habitat in "Parcel A" illustrated on Exhibit 4.3-5.)

MM 4.3-3b If construction is to occur during the coastal California gnatcatcher and coastal cactus wren nesting cycle (February 1 to August 31), a nesting bird survey shall be conducted by a qualified biologist prior to the issuance of grading and/or building permits. Active bird nests shall be mapped utilizing a hand-held global positioning system (GPS) and a 500-foot buffer will be flagged around the nest. Construction shall not be permitted within the buffer areas while the nest continues to be active (i.e., eggs, chicks, etc.) Proof shall be submitted to the Manager, General Land Use Planning in the form of a completed survey or assessment.

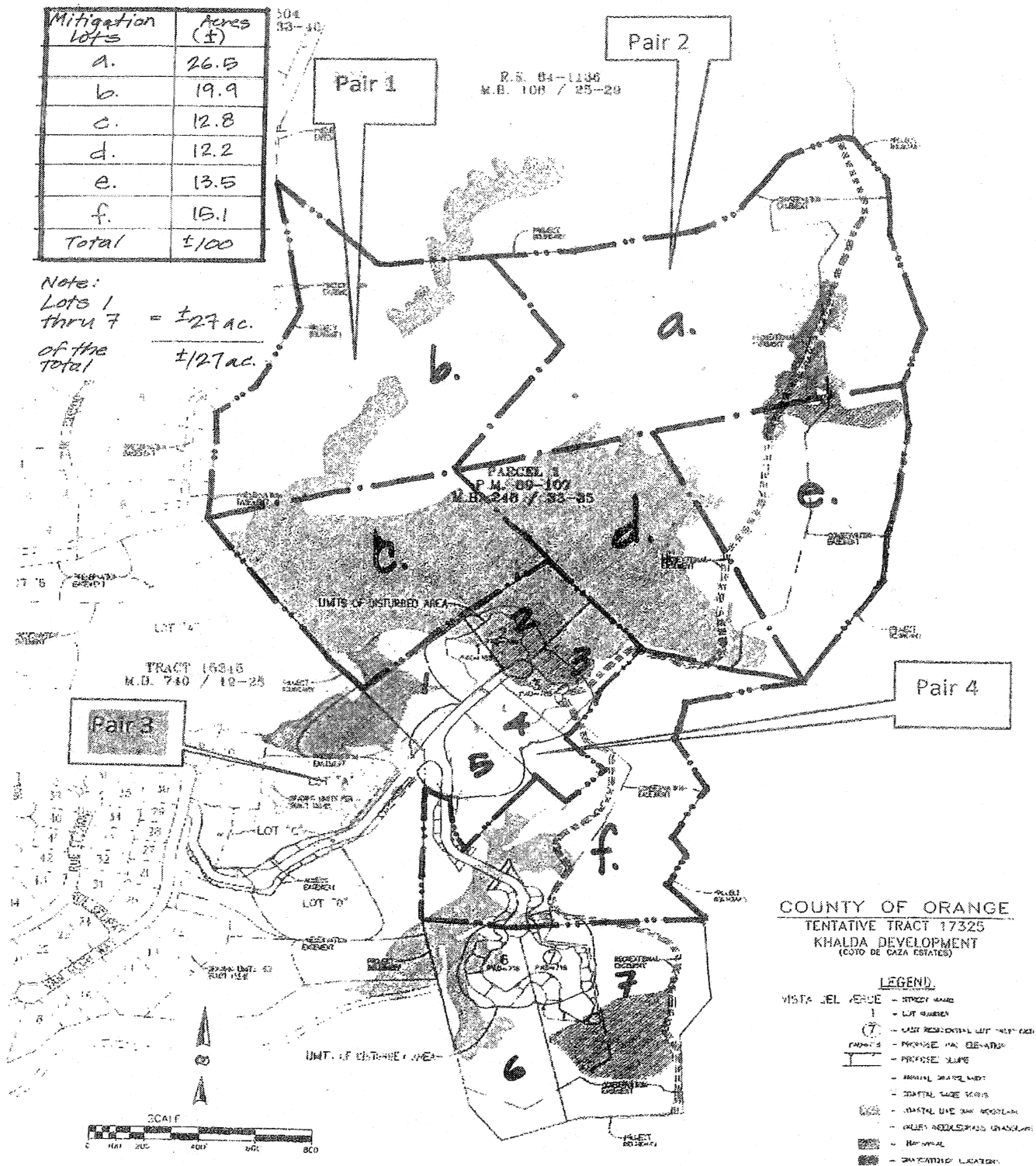
**Impact 4.3-4 Project implementation may introduce lighting, noise and related features typical of residential development (e.g., exotic/non-native vegetation, walls, domestic animals, etc.) that could adversely affect both sensitive habitat and species occurring on the subject property.**

MM 4.3-4a Prior to the issuance of the building permit, in compliance with the requirements prescribed in the Orange County Zoning Code Section 7-9-95.7(K), night lighting shall be directed away from open space areas to protect species within the area from direct night lighting. Shielding shall be incorporated into the project design to ensure that ambient lighting in the open space area is not increased. Outdoor lighting of residences will be designed so that all direct beams would be confined to dwelling sites. The level of offsite lighting and lighting fixtures would comply with the applicable requirements and policies of the County of Orange. Project lighting shall not intrude into the open space conservation areas. Street lighting and other project-related illumination sources shall be positioned, directed, and shielded so as to avoid "light spill" into the conserved areas. The proposed project shall avoid any night lighting adjacent to the open space areas. Night lighting shall not be used during the construction.

MM 4.3-4b No noise generated on the project site shall exceed residential noise standards.

Mitigation lots	Acres ( $\pm$ )
a.	26.5
b.	19.9
c.	12.8
d.	12.2
e.	13.5
f.	15.1
Total	$\pm 100$

Note:  
Lots 1  
thru 7 =  $\pm 27$  ac.  
of the  
total  $\pm 127$  ac.



R.E. 84-1136  
M.B. 108 / 25-29

PARCEL 1  
P.M. 09-107  
M.B. 240 / 33-35

Pair 4

COUNTY OF ORANGE  
TENTATIVE TRACT 17325  
KHALDA DEVELOPMENT  
(COYO DE CAZA ESTATES)

### LEGEND

WATER LEVEL VERGE

1

PROPOSED

PROPOSED

- STREET NAME
- LOT NUMBER
- LAST RESIDENTIAL LOT "BAY" OWN
- PROPOSED MAX ELEVATION
- PROPOSED DRAINAGE
- ANNUAL AVERAGE RAINFALL
- DRAINAGE TAGE TOWNS
- DRAINAGE LINE AND REGULATION
- DRAINAGE NETWORKS, TRANSFORM
- MAP NORMAL
- DRAINAGE LOCATION



MM 4.3-4c Prior to the issuance of a building permit, the applicant shall submit for approval a Landscape Plan, which shall incorporate special edge treatments designed to separate development areas from open space areas. These areas of native landscaping and fencing will serve to minimize unauthorized public access, predation by domestic animals, and illegal trespassing and dumping.

- Appropriate signage shall be posted, limiting and discouraging the use of the open space by hikers for their pets. Homeowner educational pamphlets shall be used to inform residents of the potential impacts to native habitats by uncontrolled pets.
- All manufactured slopes that abut conservation easement areas shall be retained as open space buffer zones. All manufactured slopes and areas disturbed by construction of those slopes shall be revegetated with buffer species during project construction.
- Open space areas shall be retained as open space and shall be managed for the sole purpose of wildlife conservation in perpetuity. The conservation easements shall prohibit all activities that may kill, injure, or otherwise significantly disturb wildlife or adversely impact their habitat within the easement areas. These activities include, but are not limited to, recreation (e.g., hiking, biking, walking pets, etc.), off-road vehicle use, and construction of roads (other than the equestrian trail and project roads) or other structures.

MM 4.3-4d Upon the sale of each residential lot, future residents of the proposed project shall be provided with the approved Landscape Plan, which shall include a list of native landscaping materials permitted within the project area. These materials shall be selected for their contribution to the project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique nature environment in the project area. Sage scrub shall be planted as appropriate on all manufactured slopes. In addition, restoration and enhancement of sage scrub and oak woodland species shall be completed in designated conservation easement areas. Landscape buffers shall be incorporated into the project design to minimize the intrusion of non-native plant species into natural areas. None of the plants listed in Section 6.17.2 of the Draft NCCP/MSAA/HCP shall be utilized for the project and their use by future homeowners shall be prohibited. A weeding program shall be implemented, if necessary, and shall follow the guidelines.

**Impact 4.3-5 *Project implementation will result in the use of (household) hazardous materials in limited quantities, including cleaning products, solvents, herbicides, and insecticides, which would impact groundwater and/or surface water resources.***

MM 4.3-5 Prior to the issuance of the building permit, the project shall comply with the requirements prescribed in the 2009 Landscape Ordinance. The proposed development shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements (i.e., SWIP) and the County's MS-4 (Municipal Separate Storm Sewer System) requirements, to ensure that the quantity and quality of runoff discharged to the open space area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into open space areas. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within open space areas. This will be accomplished using a variety of methods including natural detention basins,

grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

**Impact 4.3-6** *Project implementation will result in potential impacts to 0.90 jurisdictional waters that exist on the subject property, including 0.89 acre of waters of the State and 0.01 acre of waters of the U.S.*

MM 4.3-6 Prior to the issuance of a grading permit, the project applicant will be required to replace the jurisdictional wetlands at a ratio of 1:1 or as prescribed by the U.S. Army Corps of Engineers and the California Department of Fish & Game. Proof shall be provided to the Manager, General Land Use Planning.

**Impact 4.3-7** *Project implementation will result in the removal of 15 acres from the existing reserve, necessitating the approval of a minor amendment to the Southern Orange County Subregion Habitat Conservation Plan pursuant to the SSHCP Implementation Agreement.*

MM 4.3-7 Prior to recordation of the Subdivision Map, the applicant shall provide proof to the Manager, General Land Use Planning that the minor amendment to the SSHCP Implementation Agreement has been approved by the U.S. Fish & Wildlife Service.

#### **4.3.6 Level of Significance After Mitigation**

Implementation of the standard conditions (refer to Section 4.3.3) and mitigation measures prescribed in Section 4.3.5 will ensure that the impacts to biological resources are reduced to a less than significant level. Therefore, no significant adverse impacts will remain if these measures are implemented.

## 4.4 SOILS AND GEOLOGY

The subject property encompasses approximately 127 acres within the larger 5,000-acre Coto de Caza planning area. Several geologic investigations have been prepared for the all or portions of the 5,000-acre area, including those by Leighton & Associates (May 1974), Pacific Soils Engineering, Inc. (1981) and Irvine Soils Engineering, Inc. An investigation of the subject property was previously undertaken by Irvine Consulting Group, Inc. (1989), in anticipation of the use of the site as a hunt lodge/recreation area. Most recently, a preliminary geotechnical assessment was prepared for the proposed project by CDI Geotechnical Services Group. The findings and recommendations of that report, "Preliminary Geological Report for the 127-acre Tentative Tract 17325" (April 12, 2010), are summarized in this section of the Draft SER. The technical report prepared by CDI Geotechnical Services Group has been attached to the EIR as Appendix E.

### 4.4.1 Existing Conditions

#### Agricultural Soils

The soils mapped for the subject property and surrounding area include those of the Cienega-Anaheim-Soper associations, which are characterized by steeply sloping to very steep, somewhat excessively drained and well-drained sandy loams, loams, clay loams, gravelly loams, and cobbly loams on coastal foothills. According to the Orange County Important Farmlands Map (2002), the project site is identified as "Other Land" (i.e., lands which do not meet the criteria of any other category). None of the soils existing within the subject property are classified as "prime farmland," "farmland of statewide importance," or "unique farmland." Furthermore, no portion of the subject property is contained within an agricultural preserve.

#### Geologic Conditions

##### *Regional and Local Geology*

The subject property is situated on the upper eastern ridgeline of the Cañada Gobernadora, in the unincorporated community of Coto de Caza. Elevations on the site range from approximately 900 feet above mean sea level (amsl) in the northeastern corner of the property to approximately 645 feet amsl in the southwest corner of the property. The natural slopes generally descend toward the southwest from the eastern ridgeline. Most slopes on the site range from 33 percent (i.e., 3:1 horizontal to vertical) to 50 percent (i.e., 2:1 horizontal to vertical).

Regionally, the site is situated in the northern portion of the Peninsular Ranges Geomorphic Province of Southern California. Northwest-southeast trending structural blocks bound by a series of active, northwester-southeast trending, high angle, right-lateral, strike-slip faults characterize this province. The site is located near the southeastern margin of the Central Block of the Los Angeles Basin, which is bound on the east by the Elsinore Fault, on the north by the Whittier segment of the North-Elsinore Fault, on the southwest by the Newport-Inglewood Fault zone, and on the southeast by the coalescence of the Santa Ana Mountains and the San Joaquin Hills.

Locally, the underlying bedrock on the site is generally characterized by Eocene age sedimentary bedrock. Broad warping of the strata is evident, exhibiting only small variations in bedding attitudes across the site area. The low to moderate westerly dipping bedrock strata and westerly descending slope conditions that exist along the eastern ridgeline has produced several landslides. The site is underlain by low to moderate westerly to southwesterly dipping Tertiary age sandstone bedrock strata of the Santiago Formation. Quaternary surficial units exposed include terrace deposits covering the crest of the ridgeline along the eastern property boundary, a thin veneer of colluvium on the slopes and high ground areas, moderately thick deposits of alluvium and colluvium in the low-lying areas, and alluvium along the drainage. A thin layer of

organic-rich topsoil covers most of the gently sloping areas on the site. These subsurface soil profiles are described below.

#### *Earth Materials*

##### **Alluvium/Colluvium (Qal/Qcol)**

Alluvium/colluvial deposits consisting predominantly of medium to dark brown, silty sand and clayey sand is present in the drainage courses that traverse the site and underlie the lower slopes of the site. The depth of these materials ranges from three to five feet in the lower gradients and up to approximately 40 feet.

##### **Bedrock, Santiago Formation (Tsa)**

The Tertiary Santiago Formation is poorly exposed in the area. The bedrock strata are generally concealed beneath a topsoil material similar to alluvium/colluvium. Where observed during the field investigation of the site, the bedrock of this formation consists predominantly of light to medium dark, red to yellow brown and blue to green gray, slightly moist, very hard, partially indurated (i.e., hardened), fine to coarse-grained, poorly bedded to massive, clayey to silty sandstone and sandy siltstone.

##### **Terrace Deposit (Qt)**

Quaternary terrace deposits cover the crest of the ridge along the eastern side of the subject property. The terrace deposits are composed of yellowish brown to reddish brown, intercalated (i.e., existing between elements or layers), gravelly, cobbly, clayey silty sand, clayey sandy silt, and sandy silty clay. The maximum thickness of the terrace deposit on –site is estimated to be 45 feet. Displaced terrace deposit material has been incorporated into portions of the composite landslide deposit.

##### **Landslide Deposit (Qls)**

A series of landslides has been identified along the easterly limits of the subject property, consisting mainly of siltstone and sandstone derived from the Santiago Formation. Minor occurrences of conglomeratic silty sand derived from the terrace deposit, and colluvium consisting of gravelly, clayey, silty sand. The bedrock materials observed within the landslide deposits was derived from the Santiago Formation, and consist generally large sections of the bedrock strata, and appears to be poorly bedded to massive, with partially closed to closed fractures and shears. In most instances, the partially closed fractures and shears were in-filled.

##### **Topsoil**

The site is covered with a thin veneer of organic rich topsoil, which generally consists of medium to dark brown sandy clayey silt to silty clay, with tract to some fine gravel to fine cobble.

##### **Regional Faulting and Seismicity**

The site is located in the seismically active southern California region; however, there are no active faults that extend through the site or immediately adjacent to the subject property. The subject property is not located within a zone affected by fault rupture (i.e., Fault Rupture Hazard Zone).<sup>1</sup> The nearest known active fault to the site is the San Joaquin Hills Blind Thrust Fault, located approximately 5.5 miles southwest of the subject

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<sup>1</sup> State of California Special Publication 42.

property. The Elsinore Fault Zone, located approximately 10 miles east of the site, is a northwest-southeast trending feature that is located on the eastern side of the Santa Ana Mountains.

#### *Local/Onsite Faulting*

Locally, two fault traces have been mapped on the subject property. The faults have been shown discontinuous to the north and south of the project site area and are not considered active. The subject site is not located within an Alquist-Priolo Earthquake Fault Zone and there are no active or potentially active faults on-site.

#### *Ground Shaking Potential and Peak Ground Acceleration*

An estimated peak earthquake magnitude ( $M_w$ ) of 6.95 and a peak (ground) acceleration of 0.48g have been estimated for a seismic event occurring on that fault.

#### *Groundwater*

A static groundwater table was not encountered during a previous field investigation; however, the groundwater condition is not expected to have changed since that investigation. The static groundwater table is anticipated to be in excess of 50 feet below the lowest natural grade elevation on the site. Groundwater seepage from the shears and fractures was observed during the prior field investigation at depths of 30 to 60 feet below the natural grade at boring locations, in the bedrock and landslide materials. Generally, groundwater conditions can be affected by seasonal fluctuations of rainfall and environmental changes such as irrigation or pumping. Therefore, deviations from those observations may occur.

#### *Liquefaction*

Liquefaction describes a phenomenon in which a saturated, cohesionless soil loses strength and acquires a degree of cyclic mobility as a result of strong ground shaking during an earthquake. The factors known to influence liquefaction potential include soil type and depth, grain size, relative density, groundwater level, degree of saturation, and both the intensity and duration of ground shaking. As indicated above, a static or confined groundwater table was not encountered in borings drilled on the site. Exhibit 4.4-1 illustrates the relationship of the site to the potential liquefaction and landslides hazards identified in the project environs. The subject site is not located within a zone that is prone to earthquake-induced liquefaction or within a zone identified as having risk from earthquake-induced landslides.<sup>2</sup>

### **4.4.2 Significance Criteria**

Implementation of the proposed project would result in a significant adverse environmental impact if any of the following occurs as a result of project implementation.

- Loss or elimination of “prime” agricultural lands as designated by the State of California and/or County of Orange and such designated soils are capable of sustained, viable agricultural production.
- Ground shaking and/or secondary seismic effects (i.e., liquefaction, slope failure, etc.) could cause substantial structural damage and/or an unmitigated risk to human safety, even after implementation of the recommended geotechnical measures, required local and State seismic design parameters, and common engineering practices for seismic hazard abatement.

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<sup>2</sup>State of California Seismic Hazard Maps, Cañada Gobernadora Quadrangle, dated September 23, 2002.



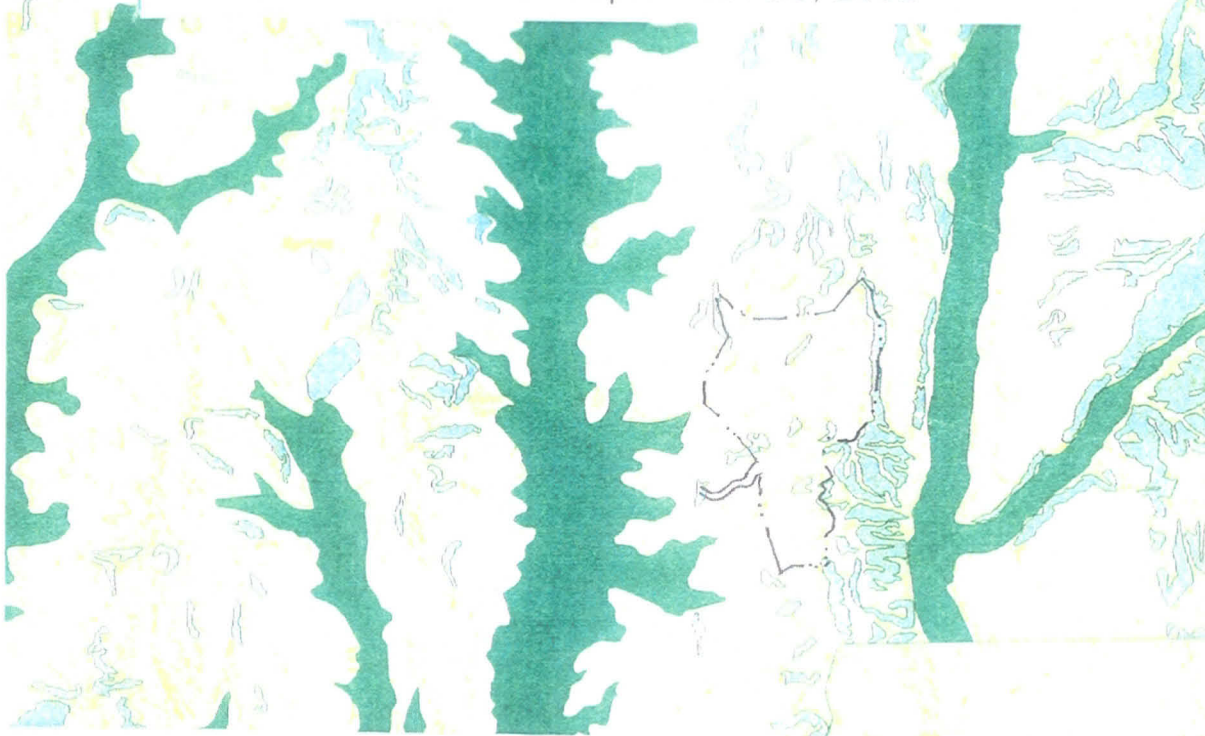
# STATE OF CALIFORNIA SEISMIC HAZARD ZONES

Delineated in compliance with  
Chapter 7.8, Division 2 of the California Public Resources Code  
(*Seismic Hazards Mapping Act*)

## CAÑADA GOBERNADORA QUADRANGLE

OFFICIAL MAP

Released: September 23, 2002



### MAP EXPLANATION

#### Zones of Required Investigation:

##### Liquefaction

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required

##### Earthquake-Induced Landslides

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required





- Adverse soil conditions such as compressible, expansive, or corrosive soils are not mitigated and present a damage hazard to occupied structures or infrastructure facilities.

#### **4.4.3 Standard Conditions**

- SC 4.4-1 Prior to the issuance of a grading permit, the plans and specifications for the proposed project shall confirm that all earthwork and grading operations associated with the implementation of the proposed residential develop, shall comply with the County Grading and Excavation Code, County Grading Manual, and all other governing State and local regulatory requirements.
- SC 4.4-2 The project shall comply with all applicable County Building Code requirements as well as those prescribed in the 2010 (or current) edition of the California Building Code (CBC).

#### **4.4.4 Potential Impacts**

##### **4.4.4.1 Short-Term Construction Impacts**

Some excavation and site grading will be required in order to prepare the subject property to accommodate the proposed residential structures. Soil erosion occurs as a result of the action of wind and water on exposed soils during the grading and site preparation phase. The only short-term impact related to soils and geology anticipated to occur as a result of project implementation is the potential for erosion during the relatively short period during which bare soils are exposed and unprotected. As indicated above, the site is located in an area of the County that is urbanized and relatively flat. Excavation and grading necessary to prepare the site in order to accommodate the proposed project would result in the possibility that the underlying soils would be exposed and could be subject to erosion if not properly protected during grading and construction operations. As a result, it will be necessary to incorporate temporary erosion protection during grading and site development activities pursuant to standard conditions. Exposure of the soils while grading and excavation activities are underway can be adequately addressed through the provision of appropriate Best Management Practices (BMPs) that will be included in the Stormwater Pollution Prevention Plan (SWPPP).

The site will be ultimately improved following grading in order to avoid significant soil erosion and/or loss of topsoil. In addition, the applicant will be required to prepare a Water Quality Management Plan (WQMP) that includes Best Management Practices (BMPs) to address erosion, consistent with the County codes and ordinances and with the approval of all agencies with jurisdiction (e.g., County of Orange, Regional Water Quality Control Board, etc.) Therefore, potential impacts are anticipated to be less than significant with the implementation of the BMPs prescribed in the WQMP.

##### **4.4.4.2 Long-Term Operational Impacts**

###### **Agricultural Soils**

Development of the subject property within the Coto de Caza Specific Plan Amendment property as proposed will not result in the conversion of any designated prime agricultural soils or otherwise significant farmland. The site is located adjacent to a developed and urbanized area of the County of Orange. As previously indicated, the project site and surrounding area are designated as "Other Land," and does not contain any prime or other important farmland. Therefore, project implementation will not result in the loss of any prime agricultural soils or important farmland. No significant impacts are anticipated and no mitigation measures are required.

### Faulting and Seismicity

As indicated in Section 4.4.1, the site is subject to moderate to strong ground shaking as a result of seismic activity that may occur along one or more of the active regional faults. The nearest active fault is the San Joaquin Hills Blind Thrust Fault; other active faults are also capable of generating seismic events that could affect the property (e.g., Elsinore Fault, San Andreas Fault, etc.). Earthquake-generated ground shaking is the most pervasive and critical earthquake factor in the County and southern California region. Ground shaking is the earthquake effect that results in the vast majority of damage.

Although the potential for ground rupture is low, the subject property is located within 50 miles of several known potential sources of potential strong seismic activity, including the San Joaquin Hills Blind Thrust Fault, which is located approximately less than six miles southwest of the site. The main seismic parameters associated with seismic activity include the distance(s) to causative faults, earthquake magnitudes, and expected ground accelerations. Based on the site-specific analysis conducted for the proposed project, it is anticipated that the San Joaquin Hills Blind Thrust Fault is considered to have the most significant potential effect at the site from a design standpoint. As indicated previously, the design earthquake on that fault could be expected to produce a magnitude 6.95 seismic event and a peak horizontal ground acceleration in excess of 0.48g at the site. Groundshaking associated with such a seismic event on the San Joaquin Hills Blind Thrust Fault may be expected to exceed 20 seconds in duration. If not properly designed, future development within the project site could be subject to damage associated with the groundshaking and peak ground accelerations generated by a seismic event.

### Fault Rupture

The project site is located in the seismically active southern California region. Primary ground rupture or fault rupture is defined as the surface displacement that occurs along the surface of a fault during an earthquake. As previously indicated, there are no active faults or fault systems known to exist on or in the immediate vicinity of the project site. In addition, the project site is not within an Alquist-Priolo Earthquake Fault Zone as illustrated on the maps issued by the State Geologist for the area. Implementation of the project is not anticipated to expose people or structures to fault rupture during a seismic event. No significant impacts will occur and no mitigation measures are required.

Two fault traces are mapped within the subject property are considered to be inactive. Although they are inactive and fault rupture along either feature is not anticipated, the presence of these fault traces may influence the precise alignments and construction requirements for the proposed residential structures. As a result, structural setback should be considered in the design of the proposed project.

### Secondary Seismic Effects

Secondary effects of seismic shaking resulting from large earthquakes on the major faults in the southern California region that may affect the site include ground lurching, shallow ground rupture, soil liquefaction, dynamic settlement, lateral spreading, seiches, and tsunamis. These secondary effects are considered to be a possibility throughout the southern California region and are dependent on both the distance between the site and the causative fault and the onsite geology. The major active faults that could produce these secondary effects include, but are not limited to, San Joaquin Hills Blind Thrust Fault, Elsinore Fault, and other active regional faults (San Andreas, etc.).

Implementation of the project is not expected to create any unstable earth conditions or changes in geologic substructures. The potential for seismic occurrences that affect the proposed project are no greater than those anticipated within the seismically active southern California region as reflected on the Seismic Hazard Zones Map (Cañada Gobernadora U.S.G.S. Quadrangle) prepared by the Department of Conservation, Division of Mines and Geology. The project site is located within an urbanized area and is

considered to be geologically stable. Potential secondary seismic effects that could impact the proposed project are discussed below.

#### *Liquefaction*

Liquefaction and liquefaction-induced dynamic settlement of soils can be caused by strong vibratory motion due to earthquakes. Liquefaction is typified by a build-up of pore-water pressure in the affected soil layer to a point where a total loss of shear strength occurs, causing the soil to flow as a liquid. Liquefaction and dynamic settlement primarily occur in loose, saturated, granular soils while cohesive soils such as silty clays and clays are generally not considered susceptible to soil liquefaction. The effect of liquefaction may be manifested at the ground surface by rapid settlement and/or sand boils. As indicated above, liquefaction is not considered to be a potential problem at the site due to the absence of high groundwater and the cohesive and relatively dense nature of the on-site soils.

As previously indicated, the project site is located adjacent to an urbanized area within the Coto de Caza community that is suitable for development. A variety of residential structures are currently located within the project environs, which demonstrate the integrity of the soil in the area. Since development currently exists within the project area and throughout the Coto de Caza residential community, construction on the subject property is also feasible from a geotechnical perspective, provided that the recommendations presented in the preliminary geotechnical investigation are incorporated into the project design. Based on the State of California Seismic Hazard Maps, Cañada Gobernadora Quadrangle, dated September 23, 2002, the subject property is not located in a zone that is prone to earthquake-induced liquefaction or with a zone identified as having a risk from earthquake-induced landslides. It is expected that no significant adverse soil conditions currently exist that would preclude implementation of the project. No significant impacts are anticipated and no mitigation measures are required.

#### *Landsliding/Slope Stability*

As previously indicated, a landslide complex is located within the limits of the 126.51-acre property northeast of the proposed 7-lot subdivision. Although no development is proposed on or adjacent to these landslide features, slope stabilization techniques must be incorporated in all planned west-facing slopes to ensure that slope failure does not occur. In addition, westerly facing natural slopes should be checked for gross and local stability and stabilized accordingly.

#### *Tsunamis and Seiches*

A seiche involves the oscillation of a body of water in an enclosed basin, such as a reservoir, storage tank, or lake. According to the County's General Plan, no enclosed bodies of water are located in the immediate vicinity of the site. A tsunami, commonly referred to as a tidal wave, is a sea wave generated by submarine earthquakes, major landslides, or volcanic action. Great magnitude waves have not historically been recorded in Orange County because the coastline is somewhat protected from the north by the coastal configuration (Palos Verdes Peninsula and Point Conception) and the offshore islands (Santa Catalina and San Clemente Islands). The tsunami potential in the Orange County coastal area for one-in-100 and one-in-500 year tsunami waves are approximately four and six feet, respectfully, suggesting that there is a very low probability of site damage resulting from potential tsunami due to the distance from the ocean. Furthermore, the site is not near any significant bodies of water that could induce seiche damage. Therefore, no significant impacts are anticipated and no mitigation measures are required.

## Groundwater

As indicated previously, groundwater is anticipated to be in excess of 50 feet below the lowest natural grade elevation on the site. Therefore, no impacts associated with groundwater are anticipated.

## Geotechnical Considerations

The major geotechnical constraints affecting development of the site as proposed include:

- The presence of disturbed and dry near-surface soils, landslide and slope instability, erosional gullies and natural drainage channels within the site.
- Non-uniform properties and depths of colluvium in the low-lying areas
- Cut and fill required to achieve the planned building and site grades.

The areas of the site that are underlain by alluvium and colluvium may be subject to differential settlement that could adversely affect the proposed residential structures. As a result, it will be necessary to undertake remedial grading, consisting of overexcavation of the existing alluvium/colluvium and bedrock materials, and backfilling the area with the excavated materials as approved compacted fill in order to reduce fill settlements and avoid structure damage in the future. All of the manufactured slopes proposed within the subject property should be constructed with slope stabilization grading techniques to ensure stability, as should any unstable natural slopes that may impact the project. Finally, improvement areas extending across bedrock cut-fill transition may also be subject to differential foundation movements if not properly addressed in the grading plan.

### 4.4.5 Mitigation Measures

**Impact 4.4-1** *The proposed residential development will be subject to potentially moderate to strong seismic groundshaking associated with seismic activity occurring along the San Joaquin Hills Blind Thrust Fault and other active regional faults, causing potential structural damage.*

**MM 4.4-1** The effects of ground accelerations from nearby fault zones shall be considered in the design of the proposed residential structures. Prior to issuance of a grading permit, the proposed development shall be designed in accordance with seismic considerations contained in the 2010 Edition of the California Building Code (CBC), and County of Orange requirements, subject to the approval of the Manager, Permit Services. The parameters specified in Section 7.5 of the Preliminary Geotechnical Evaluation Report, which are based on Chapter 16, Section 1613 of the 2010 CBC may be considered for design.

**Impact 4.4-2** *Future development may be constrained by the presence of near-surface soils (e.g., alluvium/colluvium, etc.), landslide and unstable slopes that exist within the subject property that could affect site development.*

**MM 4.4-2a** Prior to the approval of the building permit, subject to the approval of the Manager, Permit Services, excavations in site soils shall be temporarily shored or sloped in accordance with Cal-OSHA requirements. Temporary excavation slopes in site soils and bedrock, where utilized, shall be no steeper than 1:1 (horizontal to vertical), to a maximum height of 10 feet.

- MM 4.4-2b Prior to the approval of the building permit, subject to the approval of the Manager, Permit Services, all permanent excavation slopes in bedrock and fill slopes shall be properly designed, constructed, and maintained to assure satisfactory performance under design loading and service conditions. Permanent bedrock excavation and fill slopes shall be constructed at gradients no steeper than 2:1 (horizontal to vertical). Unstable natural slopes should be similarly treated.
- MM 4.4-2c Prior to the approval of the building permit, subject to the approval of the Manager, Permit Services, remedial grading consisting of over-excavation of the near surface loose disturbed soils and colluvial materials, and replacement with properly compacted fill soils will be required to provide more uniform support for new fill placements, foundations, and slabs-on-grade, reduce structure settlements, and provide satisfactory performance of planned construction. Recommended depths of remedial grading in various areas are identified in Section 7.3.5 of the Preliminary Geotechnical Evaluation Report.
- MM 4.4-2d Prior to the approval of the building permit, subject to the approval of the Manager, Permit Services, should undocumented fill soils be encountered below the zones of over-excavation recommended in the Preliminary Geotechnical Evaluation Report, they shall be removed full depth and replaced with approved compacted fill material. Unstable natural slopes shall be similarly treated.
- MM 4.4-2e Prior to the issuance of a grading permit, the applicant shall submit a geotechnical report to the Manager, Permit Services for approval. The report shall include information required by the Grading Manual and be in the required form. In addition, the report shall satisfy requirements of the 2010 CBC and the latest edition of Special Publication 117 by the California Geologic Survey (CGS)
- The stability of natural slopes impacting the development and all proposed cut and fill slopes shall be properly investigated, analyzed, and designed to Code standards. Checking for failure under all stabilization designs will be required to critical depth.
  - Hydro-collapse of colluvium and alluvium under proposed loading, where applicable, will be required.
- MM 4.4-2f Prior to the issuance of any grading permits, if the applicant submits a grading plan which the Manager, Permit Services, determines to show a significant deviation from the grading shown on the approved tentative map, specifically with regard to slope heights, slope ratios, pad elevations or pad configuration, the Subdivision Committee shall review the plan for a finding of substantial conformance. If the Subdivision Committee fails to make such a finding, the applicant shall process a revised tentative map; or, if a final map has been recorded, the applicant shall process a new tentative map or a site development permit application per Orange County Zoning Code Sections 7-9-139 and 7-9-150. Additionally, the applicant shall process a new environmental assessment for determination by the decision-making entity.
- MM 4.4-2g Notwithstanding any grading/elevations that are shown on the tentative map, or the provisions of Orange County Zoning Code Section 7-9-139 (Grading and Excavation), approval of this tentative map does not authorize the issuance of any grading permits.
- MM 4.4-2h Prior to the recordation of a subdivision map or prior to the issuance of any grading permit, whichever comes first, and if determined necessary by the Manager, Permit Services, the applicant shall record a letter of consent from the affected property owners permitting offsite grading, cross lot drainage, drainage diversions and/or unnatural concentrations. The

applicant shall obtain approval of the form of the letter of consent from the Manager, Permit Services before recordation of the letter.

- MM 4.4-2i      Prior to the issuance of any grading permit or revisions thereto, the Manager, General Land Use Planning, shall determine that the proposed grading is consistent with the grading depicted within the approved planning application.

#### **4.4.6 Level of Significance After Mitigation**

Implementation of the standard conditions prescribed in Section 4.4.3 and proposed mitigation measures will ensure that potential erosion impacts identified in Section 4.4.4 will be reduced to a less than significant level. No significant unavoidable adverse impacts will remain.

## 4.5 AESTHETICS

The aesthetic quality of the proposed project is determined by its visual character, consisting of elements such as natural and man-made features, elevations and topography, and prominent views of and from the site. In addition, surrounding urban and natural features comprise the visual setting within which the project site takes on a given degree of importance.

Both natural and artificial landscape features contribute to perceived visual images and the aesthetic value of a view. The aesthetic value of a site or feature may be influenced by geologic, hydrologic, botanical, wildlife, recreational, cultural, and urban features associated with it. Visual images and their perceived visual quality can vary substantially by season and even hourly as weather, light, shadow, and elements that comprise the viewscape change. Judgments of visual quality must also be made based on a regional frame of reference, since the same landform or visual resource in different geographic areas could have different visual resource quality and sensitivity in each setting. For example, a small hill may be a significant visual element on a flat landscape but may have very little significance in mountainous terrain.

Evaluating a project's effects on visual quality is often seen as a highly subjective matter, open to many interpretations and personal preferences. However, a widely diverse body of knowledge and study of the subject of natural and urban aesthetics has led to coherent and systematic methods of visual impact analysis. There are several aspects, approaches and mechanisms that factor into an analysis of visual impacts. Based on the goals and policies prescribed by various elements of the Orange County General Plan and related implementation documents, this analysis will employ elements of more than one analysis technique in an effort to focus on the site.

The visual analysis uses a series of visual simulations and a qualitative, descriptive approach at a broad scale to describe and evaluate the visual resources of the subject site and proposed development. The existing visual setting in and around the subject property is defined by on-site and off-site features and the various views from particular vantage points (i.e., "viewsheds") that encompass those features. The on-site and off-site aesthetic character consists of urban and natural elements, and all occur within the context of a variety of urban land uses, including single-family attached and detached residential development and commercial and industrial land uses located within the immediate vicinity of the subject property and adjacent roadways. A series of visual simulations has been prepared and serve as the basis for determining the potential impacts of the proposed project on the aesthetic character of the area.

### 4.5.1 Existing Conditions

#### On-Site Visual Character

In general, the 127-acre property is visually isolated from existing residential development within Planning Area 10 of the Coto del Caza Specific Plan. The site is characterized by moderate to steeply sloping topography and portions are incised by small drainages. The slopes consist of native habitat, including coastal sage scrub, coastal live oak woodland, annual and valley needlegrass grassland, chaparral, and non-native ruderal areas. Views to the property exist intermittently along the perimeter ridgeline trail that extends through and around the property (refer to Exhibits 4.5-2, 4.5-3, and 4.5-4 in Section 4.5.4). The most dominant aesthetic features on the site include the areas of oak woodlands and ridgeline features.

### Off-Site Visual Character

The areas west of the subject property are developed with single-family residential development along Vista Del Verde. Individual tracts that exist along Vista Del Verde are physically separated by “fingers” of open space that extend between the areas of development. The open space is composed of similar topography and habitat as that which characterizes the site. Cañada Gobernadora, a major north-south drainage in the area, is located east of the site, beyond the ridge east of the property. Due to its location east of the ridgeline, Cañada Gobernadora is not within the viewshed of the site.

### Scenic Corridors

Although no scenic corridors are identified in the project environs, the site is designated as a “scenic area” on Exhibit 3 (Major Open Space Areas) in the Coto de Caza Specific Plan. The 684-acre Planning Area 10, which is designated as Rural Residential on the Development Map (Exhibit 7 in the Coto de Caza Specific Plan). The Development Map also identifies the area in which the proposed project is located as “Resource Preservation and Scenic Areas.” A Regional Riding and Hiking Trail (Public Use) is located along the eastern limits of PA 10. In addition, several private use Riding and Hiking Trails are also identified in PA 10 in the vicinity of the subject property.

### Light and Glare

Although some lighting does exist within the residential development extending along the east side of Vista Del Verde, no artificial lighting currently emanates from the undeveloped property, which is composed of natural habitat, including occupied coastal sage scrub.

## 4.5.2 Significance Criteria

Implementation of the proposed project would result in a significant adverse environmental impact if any of the following occurs as a result of project implementation.

- The project has a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

## 4.5.3 Standard Conditions

- SC 4.5-1 Prior to the issuance of a building permit, all lighting shall be designed and located to ensure that direct light rays shall not extend beyond the limits of the individual lots.
- SC 4.5-2 Prior to the issuance of the grading permit, the landscape concept plan prepared for the project shall comply with the requirements prescribed by OCPW as prescribed below.
- Prior to the issuance of precise grading permits, the applicant shall prepare a detailed landscape plan for the project area which shall be approved by the



Manager, Permit Services. The plan shall be certified by a licensed landscape architect or a licensed landscape contractor, as required, as taking into account approved preliminary landscape plan (if any), County Standard Plans for landscape areas, adopted plant palette guides, applicable scenic and specific plan requirements, water conservation measures contained in Board Resolution 90-487, and Board Resolution 90-1341 (Water Conservation Implementation Plan).

- Prior to the issuance of certificates of use and occupancy, applicant shall install said landscaping and irrigation system and shall have a licensed landscape architect or licensed landscape contractor, certify that it was installed in accordance with the approved plan.
- Prior to the issuance of any certificates of use and occupancy, the applicant shall furnish said installation certification, including an irrigation management report for each landscape irrigation system, and any other implementation report determined applicable, to the Manager, Building Inspection Services.

#### **4.5.4 Potential Impacts**

##### **4.5.4.1 Short-Term Construction Impacts**

Implementation of the proposed project will result in site preparation (e.g., grading, etc.) and construction activities that could have some short-term effects, which would temporarily change the character of the area; however, it is important to note that these potential effects are similar to those which are typical of similar development projects in the County that undergo development and redevelopment. These potential impacts were previously addressed in FEIR No. 401. The effects of grading include exposing a portion of the site to landform alteration associated with the use of heavy construction equipment and related activities. Other effects during the initial phase of development include dust generation associated with site grading and construction of the new structures that are proposed for the subject property. Construction staging areas, storage of equipment and supplies, and related activities will contribute to a generally “disturbed” condition, which may be perceived as a potential visual impact. However, while these activities may be unsightly during the site preparation and construction phases, they are not considered significant impacts because they are temporary in nature and will cease upon completion of the proposed construction program. Nonetheless, a measure has been identified to locate staging areas away from areas most visible to the surrounding development, if feasible. Moreover, once completed, the character of the site and general area will return to normal (i.e., characterized by urban development). In addition, several measures, such as a screen fence six feet high at the property line, can be installed to minimize the potential adverse visual effects of construction. Appropriate measures have been identified to ensure that such adverse effects be minimized.

##### **4.5.4.2 Long-Term Operational Impacts**

###### **Visual Simulations**

Several visual simulations were prepared from public vantage points located along the public trail in the designated open space within Planning Area 10 to evaluate the potential visual and aesthetic impacts anticipated to result from the implementation of the proposed project. Because the site is surrounded by natural open space, public access is limited only to existing perimeter trails located along the ridgeline surrounding the site. As previously indicated, the subject property is located within an area of Coto de Caza that is designated as a “scenic area” on Exhibit 3 (Major Open Space Areas) in the Coto de Caza Specific Plan. The vantage points were selected because they represent locations within the open space that are

accessible to the public and are most representative of important public views to the site exist and environs. Because resources limit the number of view simulations that can be analyzed, vantage points are selected to be representative of a general area/location. The Draft EIR is not required to evaluate every conceivable visual vantage point of the project. However, the selected view simulations, taken in their entirety, provide a representative overview of the potential view impacts that can be anticipated by the project. Exhibit 4.5-1 provides a “development overview” of the proposed project. Exhibit 4.5-2 illustrates the locations of each of the key viewpoints from which the visual simulations were created. Table 4.5-1 describes the view locations.

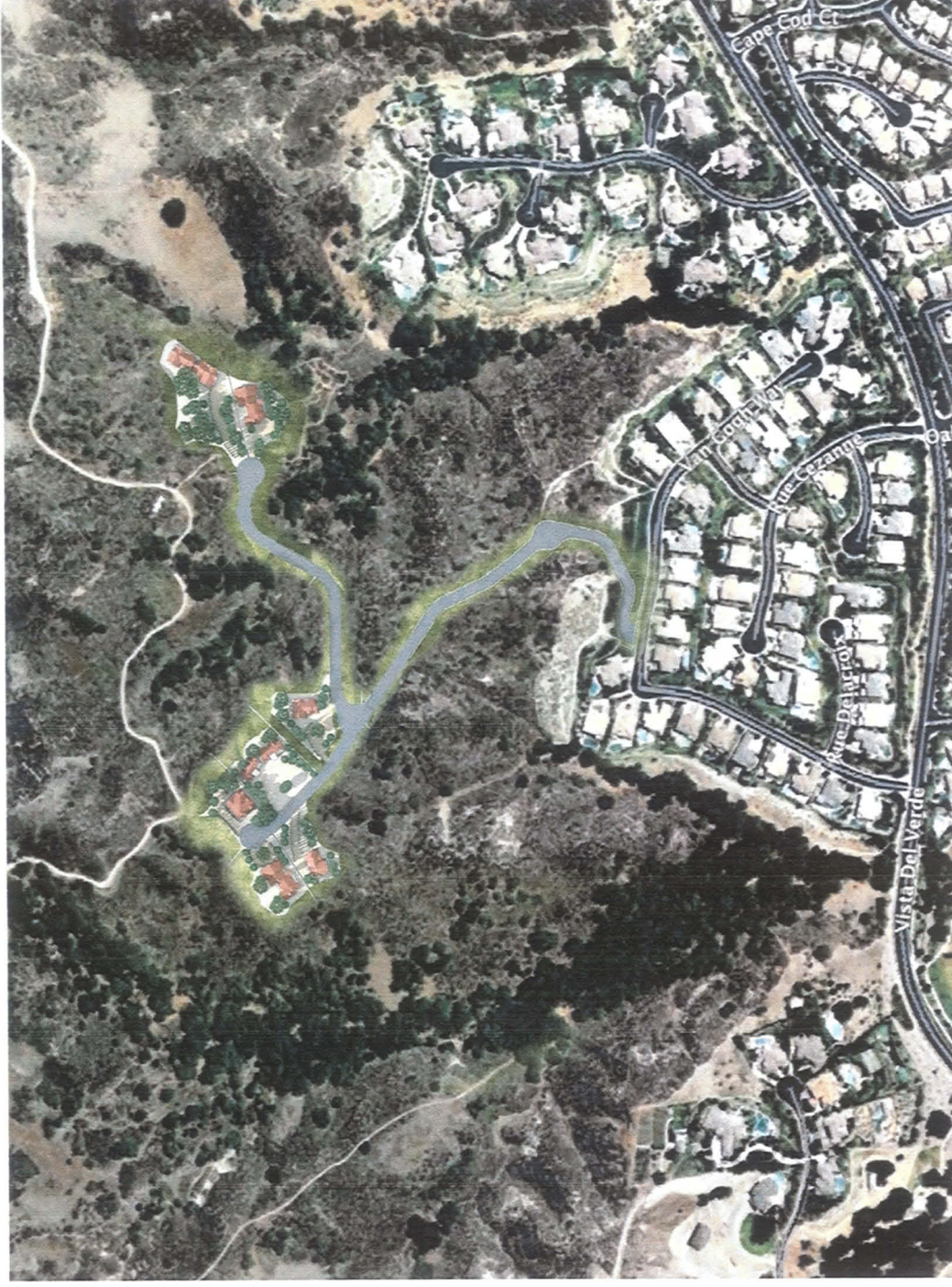
**Table 4.5-1**

**Visual Simulation View Locations  
Coto Estates**

<b>View Location</b>	<b>Description</b>	<b>Approximate Distance to Site<sup>1</sup></b>
1	Gun Club Spur (trail) north of the project site with view looking southeast	2,800 Feet
2	Line Ridge Road (trail) north of the project site with view looking southeast	2,800 Feet
3	Line Ridge Road (trail) southeast of the project site with view looking northwest	1,000 Feet
4	Van Gogh Way west of the project site with view looking east-southeast	1,000 Feet
5	Vista Del Verde south of Rue Cezanne southwest of the project site with view looking west-northwest	1,500 Feet
6	Vista Del Verde northwest of the project site with view looking east-southeast	2,200 Feet
<sup>1</sup> Measured from the view location to nearest dwelling unit.		
SOURCE: EMC <sup>2</sup> Design		

**View Simulation No. 1**

View Simulation No. 1 (refer to Exhibit 4.5-3) illustrates the view from approximately one-half mile north of the nearest proposed residential dwelling unit within TTM 17325. As illustrated in the Exhibit 4.5-3, the foreground and middleground of this southeasterly view are dominated by coastal sage scrub and coastal oak woodland habitat. The area is characterized by moderately to steeply sloping topography with intervening drainages. Distant views are those of hillsides within the Caspers Regional Park and the Cleveland National Forest. When viewed from this vantage point, only three of the seven dwelling units would be seen, including Lots 1, 2 and 5. As illustrated in the “proposed condition”, grading necessary to create the building pads for Lots 1 and 2 would alter the knoll in the northerly portion of the subject property. Elevations in that area would be reduced from approximately 830 feet above mean sea level (amsl) to approximately 785 feet amsl at Lot 1 and 786 feet amsl at Lot 2. In addition, the pad for Lot 5 (south of Lot 1), located south of Lots 1 and 2, is proposed at elevation 770 feet amsl, resulting from a combination of cut (approximately 25 feet) and fill (approximately 15 feet) to achieve the desired pad elevation.



**Exhibit 4.5-1  
Proposed Development Overview**





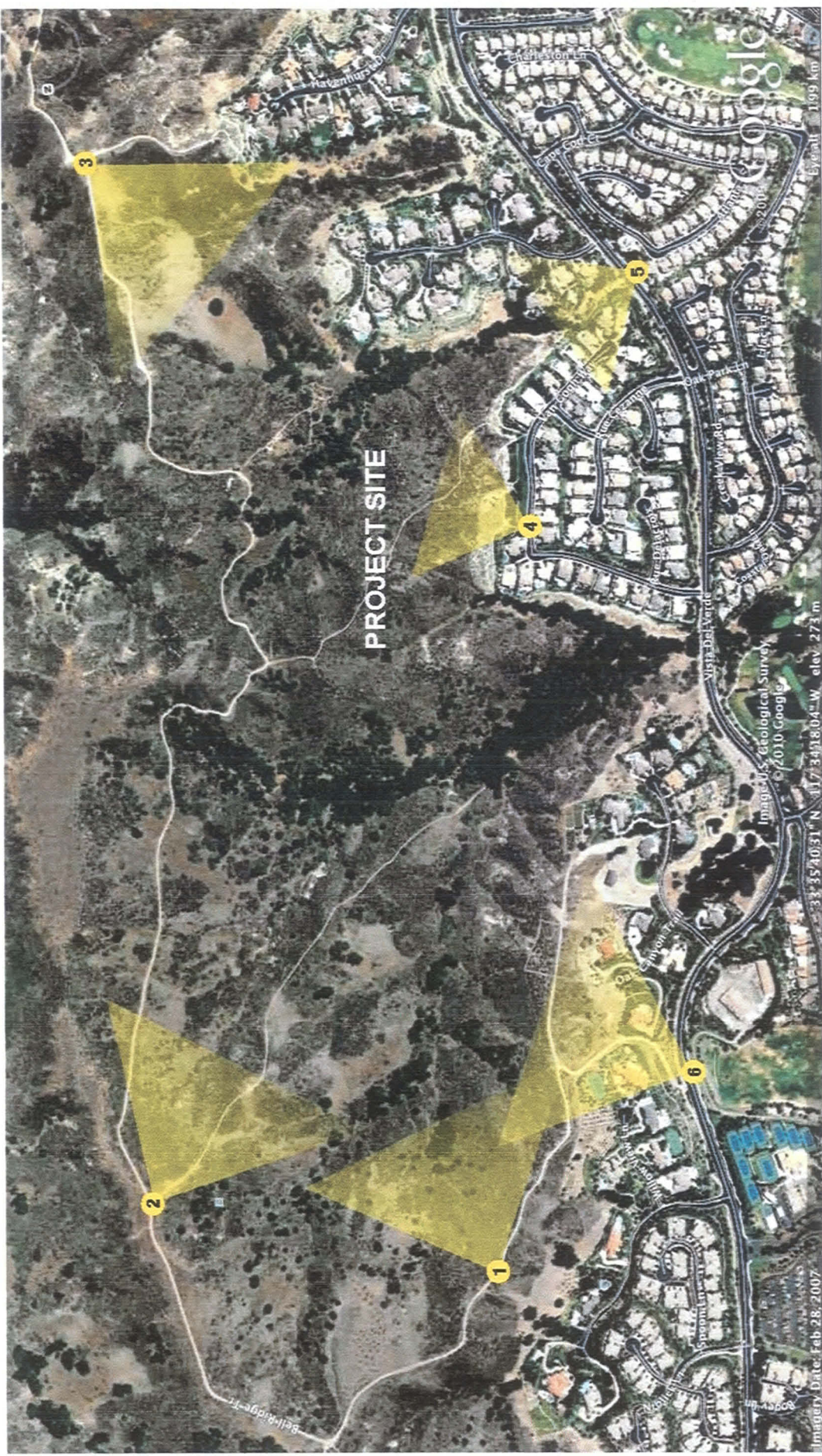


Exhibit 4.5-2  
View Locations







**Exhibit 4.5-3**  
**View 1/Proposed Condition**





Although considered a “public view location” because it is located along the ridgeline trail, public access is generally limited to residents living in Coto de Caza and visitors to the area. Therefore, the number of potential “viewers” at this location would also be limited. Although the number of viewers is not necessarily indicative of the degree of potential impact, the visual simulation shows the results of the grading and development of the site and their potential effect on views from this location, which is less than significant when compared to the existing view. As previously indicated and illustrated in Exhibit 4.5-3, only three of the seven homes and site landscaping would be visible from View Location No. 1. Landscaping would be provided in the background and would create visual relief from the landform alteration and development proposed for the site in this area. In addition to the landscaping that is proposed, the approximately one-half mile intervening distance between the view location and the proposed development will minimize the change in the natural landscape when viewed from this location. Therefore, because the proposed development would neither dominate the view from this view location nor substantially alter the visual and aesthetic character within the larger viewshed, potential visual impacts would be less than significant. No mitigation measures are required.

#### View Simulation No. 2

View Location No. 2 is located approximately 1,400 feet east of View Location No. 1 and is also approximately one-half mile north-northeast of the subject property and views from this vantage are similar to those from that location. As illustrated in this view, the foreground is characterized by a mixture of grassland, chaparral, coastal sage scrub, and coastal live oak woodland vegetation and the hills to the southeast in the Aliso-Niguel and Laguna Hills area can be seen in the background.

Three of the seven proposed homes also come into view from this location, including the homes on Lots 2, 3, and 4, as indicated in Exhibit 4.5-4. As previously indicated in View Simulation No. 1, the upper 45 feet of the existing knoll (i.e., from elevation 830 amsl to approximately elevation 785 amsl) in the middleground will be graded in order to accommodate the proposed residential development in this area. Lot 2 and Lot 3 would be situated at elevation 786 feet amsl. As a result, the three homes would come into view from View Location along the existing riding and hiking trail northeast of the project site. As previously indicated, however, the site will be landscaped with native plant materials so that development would not become a dominant feature. The landscaping combined with the nearly one-half mile intervening distance between the development and the trail will minimize the appearance of the dwelling units from this view location. The proposed homes would neither dominate the view nor result in a significant change in the landscape that would compromise the visual character of the area. Potential impacts would be less than significant; no mitigation measures are required.

#### View Simulation No. 3

As indicated in the Visual Simulation Key Map (refer to Exhibit 4.5-2), the location of this viewpoint is at the intersection of two ridgeline trails southeast of the subject property. This visual simulation, looking northwest toward the subject property shows that the foreground is dominated by annual grassland and chaparral habitat; coastal sage scrub habitat can be seen in the middleground. The two most southerly dwelling units proposed for the project are in view from View Location No. 3. The homes proposed for Lot 6 and Lot 7 can be seen in this visual simulation in the middleground, the west of the existing trail. Both cut and fill will be required to create Lot 6, which will have a pad elevation of 716 feet amsl. The area comprising Lot 6 would be lowered by approximately 15 feet. Existing elevations in Lot 6 range from approximately 715 to about 735 feet amsl; the pad elevation proposed of this lot is 718 feet amsl, resulting both cut (approximately 15 to 25 feet) and a small amount of fill (less than five feet). As a result, the upper portion of each of the proposed dwelling units would extend into the viewshed from View Location No. 3, as shown in Exhibit 4.5-5. In addition, the proposed landscaping, which would encompass native plant species, can also be seen surrounding the proposed dwelling units. No other structures could come into view from this vantage point. Similar to the views from View Location No. 1 and View Location No. 2, the proposed development would not dominate the visual landscape.

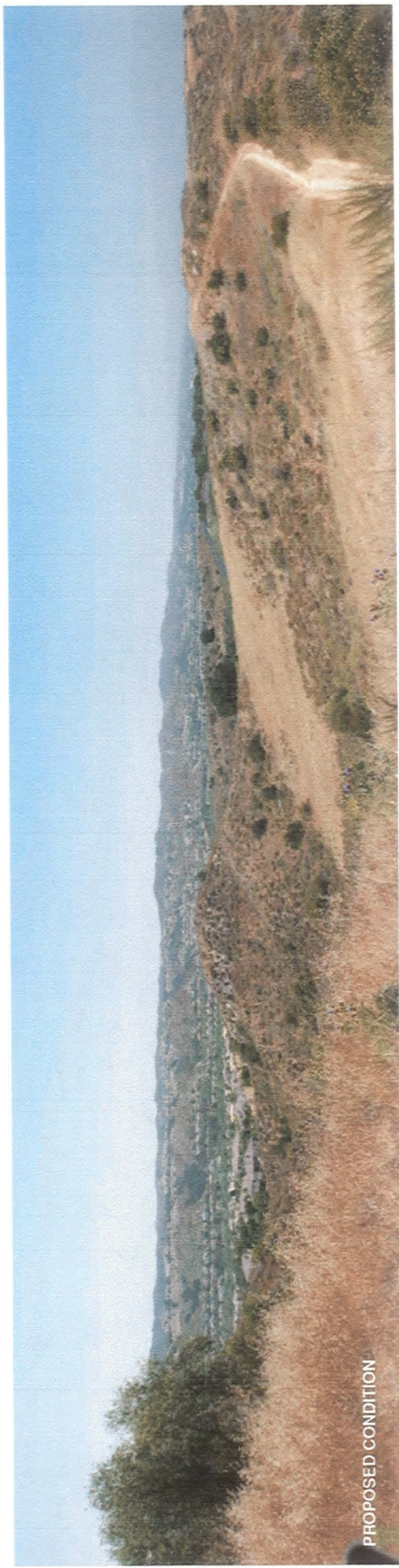
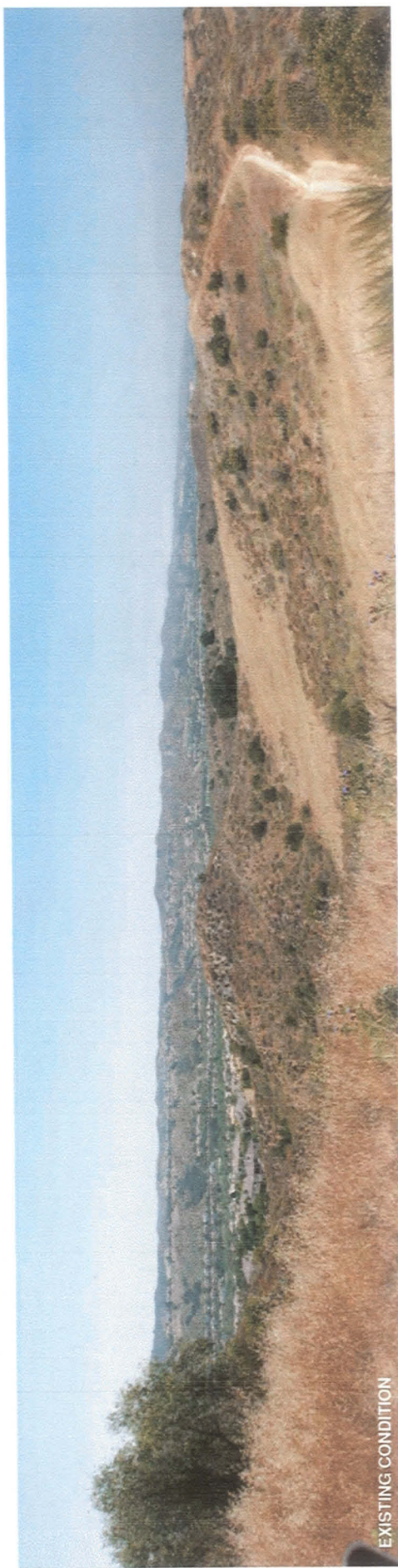




**Exhibit 4.5-4**  
**View 2/Proposed Condition**







**Exhibit 4.5-5**  
**View 3/Proposed Condition**



#### View Simulation No. 4

View Simulation No. 4, which is located south of the “knuckle” of Van Gogh Way, depicts the project entry and access road. As illustrated in the “existing condition” view from this location, an “at grade” greenbelt can be seen east of Van Gogh Way in the foreground. The topography rises to the east and consists of native habitat, including coastal sage scrub. The topographic features in the middleground effectively block more easterly views of the site. As indicated in the “artist’s simulation” of the proposed entry, a portion of the existing greenbelt would be removed in order to accommodate the access road; however, only a small portion of the roadway would be visible. Nonetheless, extensive landscaping is proposed to provide visual relief in the area, as indicated in Exhibit 4.5-6. The Site Plan/Plan View, which reflects the landscape plan for proposed project (refer to Exhibit 4.5-7) includes native pepper, sycamore and oak varieties, which are species that are intended to create the desired character of the proposed project. Although the most dramatic changes to the visual landscape would occur at the project entry, no structures are proposed that would dominate the foreground views. The trees and landscaping proposed along the roadway would screen views to the east; however, no significant visual impacts would occur as a result of the proposed project at View Location No. 4.

#### View Simulation No. 5

Exhibit 4.5-8 illustrates the existing northeasterly view from Vista Del Verde between Tract 15245 and Tract 15327. As can be seen from this vantage point, the split rail fencing and introduced landscaping can be seen along the roadway in the foreground. Also in the foreground are the manufactured slope along the southern and northern boundaries of Tract 15245 and Tract 15327, respectively. In addition, a trail that extends easterly toward the southern limits of the subject property is also in view in the foreground. Some oaks and coastal sage scrub can be seen in the middle- and background, respectively; however, no portion of the site or the proposed development can be seen from View Location No. 5. Therefore, no visual impacts are anticipated and no mitigation measures are required.

#### View Simulation No. 6

Similar to View Location No. 6, Exhibit 4.5-9 also illustrates the “existing conditions” from Vista Del Verde. The easterly view from the roadway through Tract 14337 illustrates Vista Del Verde in the foreground along with the parkway landscaping and fencing. The manufactured slope and introduced landscaping dominate the middleground view, with some homes and landscaping visible along the tops of the slopes. The trail that extends from Vista Del Verde can also be seen meandering in a southeasterly direction between the homes. (This trail connects to the perimeter ridgeline trail in Planning Area 10 on which View Location Nos. 1 and 2 are located.) As indicated in the view from View Location No. 6, neither the subject site nor the proposed residential development can be seen. As a result, no significant visual impacts would occur and no mitigation measures are required.





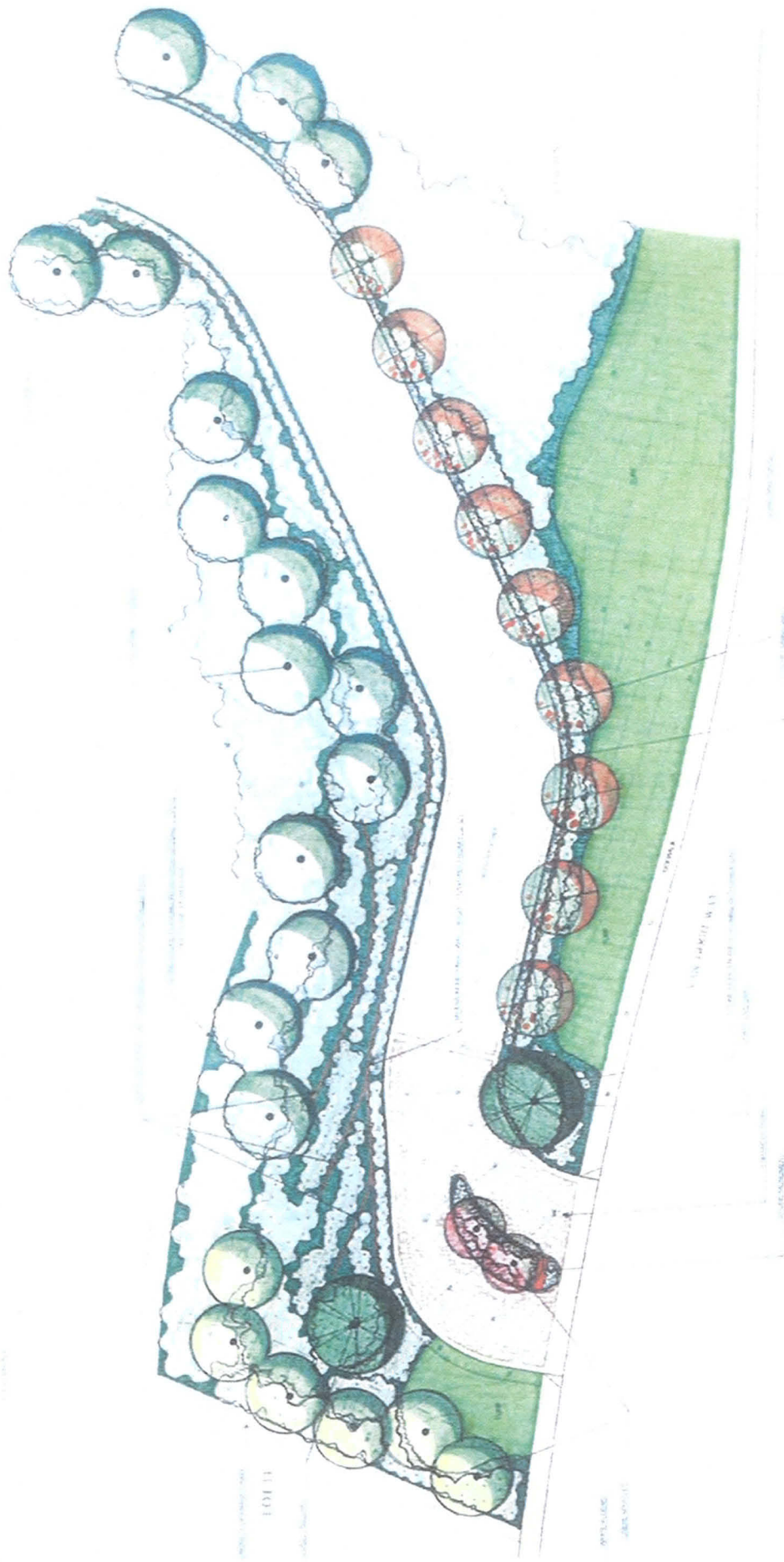
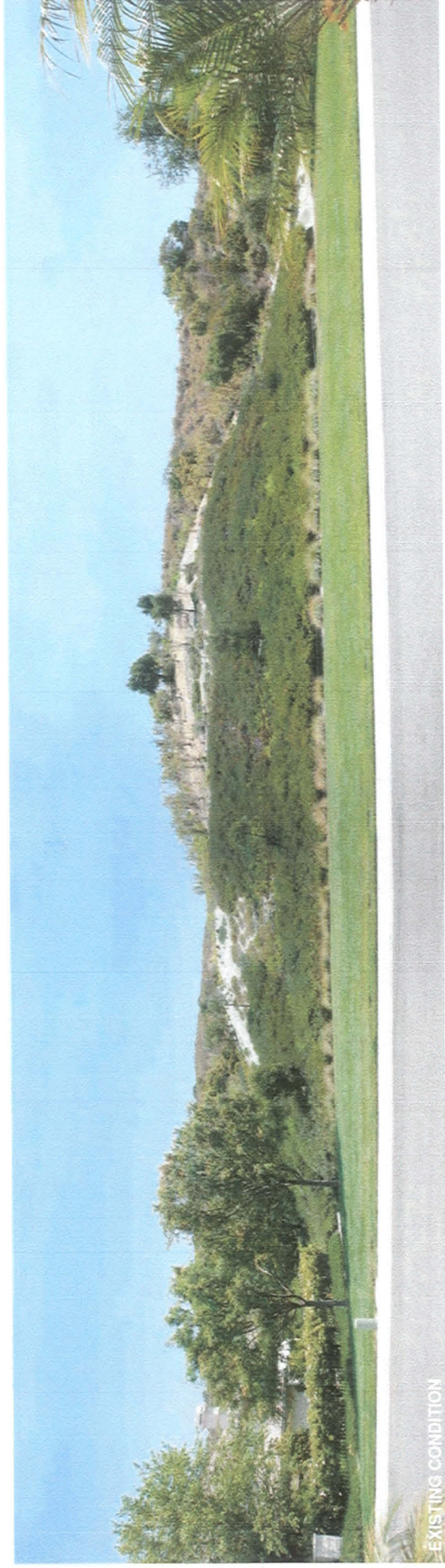


Exhibit 4.5-6  
View 4/Entry Site Plan





PROPOSED CONDITION



Exhibit 4.5-7  
View 4/Entry Proposed Condition – No View

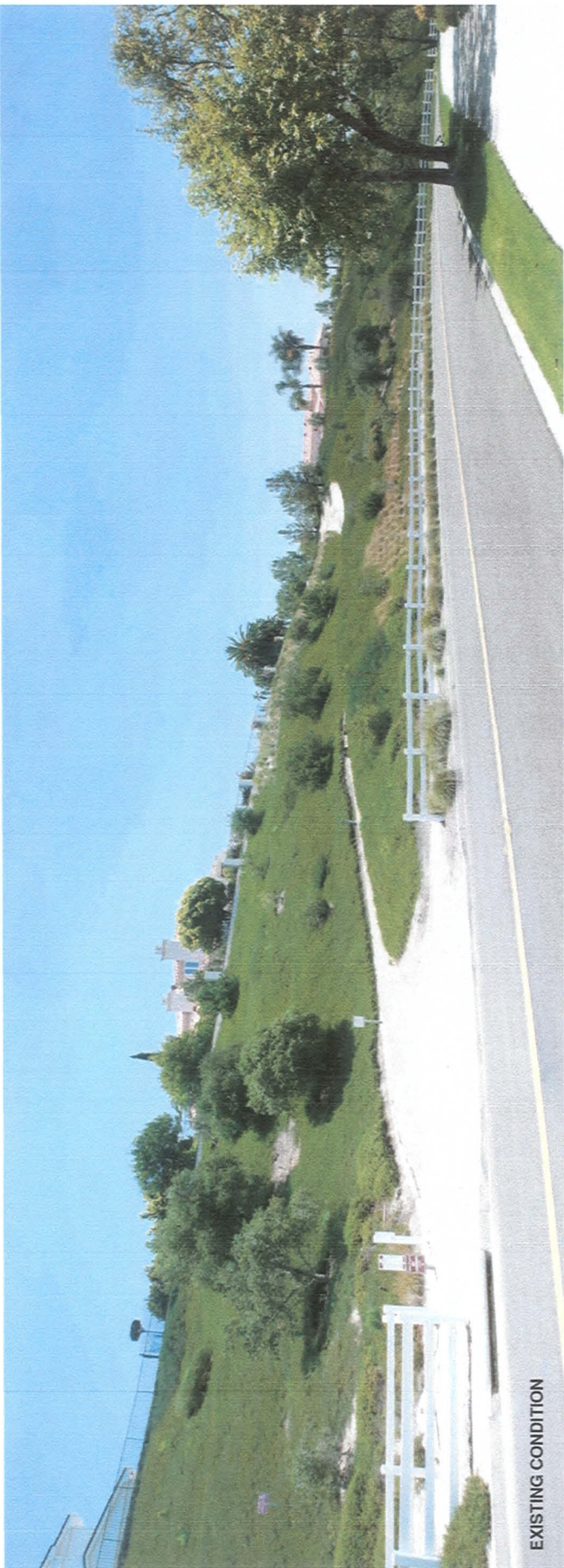






**Exhibit 4.5-8**  
**View 5/Proposed Condition – No View**





**Exhibit 4.5-9**  
**View 6/Proposed Condition – No View**





### Light and Glare

At the present time, no artificial lighting emanates from within the subject property, which is undeveloped. The existing residential development within Tract 15425 is characterized by lighting along the street and other interior and exterior lighting associated with residential uses. This illumination occurs along the frontage of the Van Gogh Way and within the individual residential properties; however, none of this lighting extends into the subject property. Lighting for the proposed project will also be provided for the same purpose as that which currently exists in the area (i.e., security and structure illumination). It is anticipated that the lighting will be energy efficient and will also be shielded or recessed as required by existing code, so that direct glare and reflections are contained within the boundaries of the property. As a result, implementation of the County's standard lighting conditions require compliance with the lighting standards and requirements, which will ensure that no significant lighting impacts occur; no mitigation measures are required.

#### **4.5.5 Mitigation Measures**

As indicated in Section 4.5.4, project implementation will not result in potentially significant visual impacts. The proposed project has been designed to minimize grading and landform alteration that would result in potential visual impacts. Therefore no mitigation measures are required.

#### **4.5.6 Level of Significance After Mitigation**

Incorporation of the standard conditions (refer to Section 4.5.3) will effectively address the visual and aesthetic character of the area. In addition, the proposed project will be designed to comply with the development standards prescribed for Rural Residential development within the Coto de Caza Specific Plan. Therefore, no potentially significant unavoidable adverse impacts will occur as a result of project implementation.

